An investigation of language and communication, from infancy to middle-childhood, in children at high familial risk for Autism Spectrum Disorder (ASD)

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Case Study A

Cognitive Behaviour Therapy for Childhood Obsessive Compulsive Disorder with features of Olfactory Reference Syndrome

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3 Abstract

This case study describes the treatment of a 12 year old girl for Obsessive Compulsive Disorder (OCD) and features of Olfactory Reference Syndrome (ORS), using Cognitive Behaviour Therapy (CBT) with Exposure and Response Prevention (ERP) for OCD and treatment modifications for features of ORS. Treatment involved fourteen hour-long, weekly sessions and outcome was measured using the Children's Yale-Brown Obsessive Compulsive Scale (CYBOCS). Results indicated a significant reduction in symptoms from assessment to end of treatment, with further gains made at follow-up. This case is discussed in relation to the therapeutic relationship, the role of the formulation in guiding treatment and the use of manualised treatment for paediatric OCD with additional strategies for addressing symptoms of ORS.

4 Literature Review

4.1 Obsessive Compulsive Disorder (OCD)

Obsessive Compulsive Disorder (OCD) is characterised by obsessions - intrusive thoughts, images or urges - and/or compulsions - thoughts or actions used by the person to try to supress or neutralise anxiety and distress associated with obsessions (American Psychiatric Association, 2013). In children and young people, obsessions commonly relate to fear of contamination or of harm coming to others and common compulsions include washing, checking and ordering (Chung & Heyman, 2008). These symptoms are associated with significant distress and functional impairment.

OCD is a common amongst young people, affecting between 1-2% of children and adolescents (NICE, 2005). OCD amongst children and young people presents similarly to adults, though there are some developmental differences, for example more fear of death of a parent for young children (Kalra & Swedo, 2009). The majority of young people who have OCD meet diagnostic criteria for an additional psychiatric or neurodevelopmental disorder (Pediatric OCD Treatment Study (POTS) Team, 2004). Tics and Tourette Syndrome, Autism Spectrum Disorder (ASD), Eating Disorders, Depression and Attention Deficit Hyperactivity Disorder (ADHD)are amongst the commonly diagnosed comorbidities (Krebs & Heyman, 2010).

4.2 Treatment for Paediatric OCD

Cognitive Behaviour Therapy (CBT) with Exposure and Response Prevention (ERP) is first line treatment for young people with OCD as recommended by NICE (2005). Evidence from over ten Randomised Controlled Trials (RCTs) supports the use of CBT for treating OCD in young people, with the results of these studies indicating that 40-88% achieve remission (e.g. Bolton & Perrin, 2008; De Haan, Hoodguin, Buitelaar, & Keijsers, 1998; Pediatric OCD Treatment Study (POTS) Team, 2004; Storch et al., 2007; Williams et al., 2010).

ERP has been found to be the active element in CBT for OCD (Foa, Steketee, Grayson, Turner, & Latimer, 1984). ERP is based on Behaviour Theory (Rachman, 1971), according to which obsessions are neutral stimuli that become associated with anxiety. The person develops avoidance and escape responses that terminate exposure to the feared stimulus and prevent the extinction of the anxiety response. These behaviours are negatively reinforced, making them more likely to re-occur. Therefore the person becomes trapped in a vicious cycle whereby compulsions provide temporary relief from the anxiety associated with obsessions, thereby maintaining the obsessions. Treatment therefore involves breaking this cycle by exposing the person to the feared stimulus without them engaging in escape behaviours.

4.3 Olfactory reference Syndrome

Olfactory reference syndrome (ORS) has been defined as a psychiatric condition characterised by persistent preoccupation with body odour accompanied by shame, embarrassment, significant distress, avoidance behaviour and social isolation (Lochner & Stein, 2003). Bad breath and sweat are the most commonly reported odour descriptions and the majority of cases (95%) report repetitive behaviours related to the olfactory preoccupation, for example excessive showering (Phillips & Menard, 2011).

ORS is thought to be a rare condition, with estimates of approximately 0.5% in adult clinical populations having been reported (Marks & Mishan, 1988). However, the condition has received little empirical attention and it has been suggested that it may be under-recognised (Feusner, Phillips, & Stein, 2010). There are no diagnostic criteria in the DSM or ICD classification systems and differential diagnosis is complicated by the overlap in symptoms with conditions such as social anxiety, delusional disorder, OCD and body dysmorphic disorder (BDD), as well as co-occurrence with these conditions (Feusner, et al., 2010). Begum & McKenna (2011) identified eighty-four published cases meeting proposed criteria for ORS. The majority of cases were over 20 years of age (58%), with the youngest reported case being 11 years old. Major depression and social phobia were the most frequently

reported comorbid conditions (55% and 60% respectively), and OCD was also commonly reported (25% of cases). The evidence suggests that it is a chronic and debilitating condition with forty percent of cases having been housebound for at least 1 week because of ORS, 68% of cases reporting a history of suicidal ideation and 32% having attempted suicide (Phillips & Menard, 2011).

4.4 Treatment of Olfactory Reference Syndrome

There are no evidence based treatments or guidelines for working with clients who present with ORS. A review of the literature indicates that patients with ORS have been treated with behaviour therapy alone, cognitive behaviour therapy, eye movement desensitization and reprocessing (EMDR), psychodynamic therapy and psychotherapy (Begum & McKenna, 2011). The evidence suggests that 78% of cases respond to psychological treatment (Begum & McKenna, 2011), though sample sizes are extremely small.

5 Case Description

5.1 Referral and Assessment

Jane was 11 years and eight months old when she was referred to the National Specialist OCD service for assessment and treatment by her CAMHS community psychiatric nurse, following her father's request for a second opinion regarding her treatment.

The assessment involved a meeting with Jane, her father and her step-mother, to introduce the assessment and build a rapport. Jane then met with the previous trainee clinical psychologist to complete a formal assessment of her OCD symptoms using the Children's Yale Brown Obsessive Compulsive Inventory (CY-BOCS; Scahill et al., 1997). The CY-BPOCS is a clinician rated interview which yields a reliable, valid measure of obsessive-compulsive symptom severity in children and adolescents with OCD (Scahill et al., 1997). Jane's father and stepmother met with the team psychiatrists to complete a detailed developmental history and description of her

current problems. The MDT then met to discuss the case and this was followed by feedback from the team to the family.

5.2 Presenting problems

The results of the assessment indicated that Jane had moderately severe OCD, as indicated by a CY-BOCS score of 23 (see Appendix A for a description of her Obsessions and Compulsions). At the time of the assessment, Jane's OCD was having a significant impact on daily living. Her OCD rituals were taking her approximately three hours per day and she was routinely late for school. Her evenings were spent performing rituals, which were preventing her from engaging in extra-curricular activities and resulted in her going to bed very late. Jane did not present with any comorbid difficulties at the time of the assessment. However, a number of the obsessive-compulsive symptoms recorded during her CYBOCS assessment were in line with symptoms of ORS (Phillips & Menard, 2011).

5.3 Relevant History

5.3.1 Developmental and Personal History

Jane was the youngest of five children. She was born ten years after the birth of her next eldest sibling. Her mother was reported to have been very anxious during the pregnancy due to her age. She suffered severe post-natal depression and was admitted to the mother and baby unit. She had difficulty bonding with Jane.

Jane met her developmental milestones and was an outgoing and sociable child. Her teacher reports indicated that she was hard-working and got on well with her peers. However, she is reported to have suffered from separation anxiety as a child. Her mother died suddenly from a pulmonary embolus when she was 10 years old. Her father subsequently remarried and the family moved to a new home.

5.3.2 History of the Presenting Problem

Jane had engaged in ritualistic behaviours since the age of four and her symptoms first became impairing, at a level that would meet criteria for OCD, when she was

seven years old. Her adherence to her eczema routine had become ritualised and she displayed other compulsions such as hand-washing, arranging her hair in a certain way and ensuring that her clothes were 'just right.' Jane's symptoms worsened following her mother's sudden death when she was 10 years old. She was unable to go to school until midday as she was taking up to three hours to shower in the morning.

5.3.3 Treatment History

Jane saw a school counsellor for difficulties with separation anxiety from the age of six. She was referred to CAMHS when she was seven years old as her G.P. was concerned about her ritualised behaviour and there she received treatment for separation anxiety and ritualised behaviour. She was re-referred to CAMHS in 2012, following the worsening of her OCD symptoms subsequent to her mother's death. She attended a group for bereavement counselling and received CBT for OCD. However, this was interrupted for a three month period due to her therapist becoming unwell.

6 Formulation

Jane's case was initially formulated and revised during the course of treatment using the "Five 'P's" model (see Appendix B). This was done to improve understanding factors contributing to her current presentation, inform current treatment and specify ways in which barriers to treatment could be overcome.

In terms of predisposing factors, Jane may have had a genetic vulnerability to developing OCD and/or other mental health difficulties. Her father reported having OCD traits and her mother suffered from anxiety and severe postnatal depression. Attachment difficulties with her mother may have further predisposed her to having an anxiety disorder. Finally, having severe eczema, which required regular care, may have contributed to OCD behaviours involving regular cleaning and self-care.

Several significant life events are likely to have precipitated the worsening of her OCD symptoms when she was 10 years old. These included her mother's

unexpected death from a pulmonary embolus, her father's subsequent remarriage and her transition to secondary school.

It is likely that the discontinuation of her previous CBT for OCD treatment contributed to the maintenance of the problem. It was reported that several new OCD compulsions emerged during this time. In addition Jane was acquiescent and eager to please which meant that she may not have fully reported the extent of her symptoms and distress. In addition her father was very protective of her and accommodated some of her ritualised behaviours. During her previous treatment, Jane's father had not been included in the treatment session and therefore his accommodation of her compulsions had not been addressed. Jane had a number of cognitive distortions in relation to sweating and smelling (for example over estimating the amount she would sweat and thinking that it is unhygienic to sweat) which were likely to further maintain her obsessional worries and ritualised behaviours.

There were a number of protective factors that would help Jane to overcome her OCD. She was motivated to engage in treatment and was able to develop a good working therapeutic relationship. She had good interpersonal skills and was popular at school. She also had a very supportive father and her school was also very supportive of her.

7 Aims of treatment

The primary aim of treatment was to reduce Jane's OCD symptoms, and her associated symptoms of ORS. The secondary aim was to help her to progress towards her short-term goals of taking less time in the shower (30 mins rather than an hour), being on time for school and attending extra-curricular activities, and her long term goal of going to summer camp. The primary mode of treatment used was CBT with ERP to address her OCD symptoms, as well as additional CBT techniques such as behavioural experiments, to address her symptoms of ORS if necessary.

8 Intervention

8.1 Treatment Outline

Jane was seen for 14 weekly, one-hour sessions of CBT and three follow up appointments. The CBT sessions were protocol-driven and developed for use among 11-18 year olds at the N&S OCD Clinic. The 14 sessions were divided into three components (1) Psychoeducation; (2) Exposure with Response Prevention and (3) Relapse Prevention.

8.1.1 Sessions 1 and 2: Psychoeducation

The aims of the first session were to develop a rapport with Jane and her father, introduce them to the structure of CBT sessions and provide initial psychoeducation about OCD. Obsessions and compulsions were defined and normalised. The causes of OCD were discussed and OCD was 'externalised' by referring to OCD as an entity in its own right.

The next part of the session involved understanding anxiety. Anxiety was described as a normal feeling that can be helpful in certain circumstances. Jane was able to give examples of her own anxiety symptoms. We discussed the fight or flight response and how the fight or flight response can be triggered when there is no real danger. We then developed an anxiety rating scale, using Jane's examples of non-OCD anxiety-provoking situations. Finally, we discussed the concept of anxiety habituation.

The aims of the second session were to help Jane to understand the relationship between anxiety and OCD, to develop an OCD symptom hierarchy and to introduce the CBT model of OCD and the purpose of ERP. Though Jane initially struggled to relate the fight or flight concept to her OCD, she was able to develop an understanding of how her obsessions could trigger physical symptoms of anxiety. We developed an OCD symptom hierarchy by rating her OCD compulsions in terms of how anxiety provoking each of them would be for her if she could not perform them.

The CBT model of OCD was introduced and a shared formulation was developed (see figure 1). Jane was able to give an example of how her own obsessions related to her compulsive behaviour. She described that she worried about getting sick and therefore avoided touching doors and bins, particularly in public places. She understood that performing compulsions made OCD stronger, by maintaining her anxiety when her obsessions were triggered. Finally, we discussed that the best way to break the OCD cycle is to change the behaviour. Jane understood the concept of ERP and the rational for treatment.

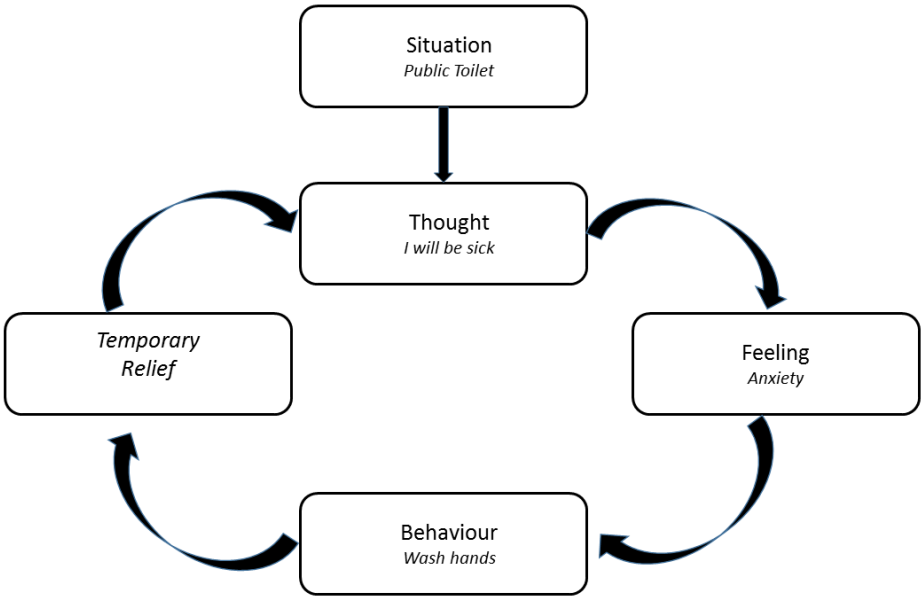

Figure 1 Shared Formulation of the OCD Cycle

8.1.2 Sessions 3-12: ERP for OCD with adaptations for ORS

The initial focus of these sessions was to 'fight back' Jane's OCD by collaboratively designing ERP tasks that we could perform in sessions and that she could then practice at home. The sessions followed the same basic structure: (1) Agenda setting; (2) review of homework; (3) *in vivo* ERP task; (3) homework setting and (4) a summary of what was learned in the session.

In the first of these sessions, Jane identified an ERP task that she could perform within the clinic. This involved touching the bin in the public toilet with her hand and not washing it afterwards. She anticipated that her anxiety would rise to 4-5/10

whilst performing this task. Jane rated her anxiety at 7-8/10 whilst performing this task. However, within 10 minutes her anxiety had reduced to 1/10. Jane was able to reflect that she had learned that when she exposed herself to an anxiety provoking situation, her fear reduced with time.

Subsequent ERP tasks performed in sessions and at home, involved working through Jane's OCD hierarchy to address her compulsions. These involved going to public toilets outside of the clinic and touching the taps and door handles without washing her hands afterwards, taking the rubbish out at home, practicing washing her teeth in a non-OCD way, re-wearing clothes and pyjamas, not changing her bed-sheets on a specific day of the week, not checking that doors were locked, not re-arranging her items on her desk to make them 'just right' and messing up her hair without fixing it.

Jane initially made good progress and mid-way through treatment we re-examined her OCD hierarchy. Jane identified a number of compulsive behaviours that were still particularly difficult for her to fight back. These were (1) wearing her clothes and pyjamas more than once; (2) wearing excessive amounts of deodorant; (3) getting dressed in the morning without washing first and (4) doing her hair until it felt 'just right.'

We sought to address these remaining symptoms in a number of ways. Firstly, we designed further ERP tasks for Jane to practice in session and at home. For example, Jane's father brought in some previously worn clothes for her to put on in session. However, Jane showed some resistance at this stage, often having excuses for not having practiced ERP tasks that she found particularly difficult.

In order to address Jane's resistance to doing more difficult ERP tasks we distinguished between doing things the 'OCD way,' the 'non-OCD way' and the 'anti-OCD way'. For example, in terms of wearing deodorant, the 'OCD-way' was to wear excessive deodorant, the non-OCD way was to wear a normal amount of deodorant and the 'anti-OCD way' was to wear no deodorant and go running until sweaty. We also used the metaphor of weeding a garden whereby we could fight OCD by

chopping down the weeds, but that the best way to make sure that OCD didn't come back would be to dig the weeds out by their roots.

Jane responded well to these strategies and in the latter part of the treatment sessions she did a number of more difficult ERP tasks in sessions. For example, she also touched a toilet seat, as well as the floor and walls of a dirty public toilet, and touched her skin afterwards without washing her hands. We also went running together in the park without wearing any deodorant. Jane found this latter task very difficult to perform and needed a lot of encouragement. She said it would have been even more difficult if it had been a hot day, as she would have sweated more, but as it was cold and there was therefore less chance of sweating, she was able to do it. When preforming these tasks it was evident that Jane no longer found the tasks relating to contamination or the 'just right' feeling difficult to perform. However, she struggled to practice tasks that involved not-wearing deodorant and sweating, re-wearing clothes and getting dressed without washing first. In addition, she expressed cognitive distortions in relation to sweating and smelling. For example, she said that people would think that she is unhygienic and disgusting if she didn't wear deodorant and started to smell, and that they would not want to be her friend.

The remaining symptoms of Jane's OCD were in keeping with features of ORS. There are no guidelines for treating symptoms of ORS, however, as discussed above, the evidence suggests that psychological treatments (including cognitive and behavioural techniques) can be beneficial. As behavioural techniques had already been used to try to address these symptoms, and Jane was expressing cognitive distortions in relation to smelling and sweating, a decision was made to use cognitive strategies, in addition to the ERP tasks, in order to address Jane's remaining symptoms in relation to smelling and sweating.

Firstly, we designed a questionnaire to examine people's attitudes to wearing deodorant and smelling (Appendix C). Jane noticed that most people who responded to the survey wore deodorant on a regular basis and would not like to

smell but that they would not think that someone was disgusting or unhygienic if they did smell and would not like a friend less if they smelled.

We then designed a behavioural experiment to test out what people would think of us if we made ourselves smell by holding a paper cup filled with rotten milk and food. Jane predicted that people would think that we smelled (50%), were unhygienic (50%) and disgusting (30%). We then interacted with several people from the clinic and afterwards asked them to write down if they noticed that we smelled and if they thought we were disgusting or unhygienic. I first performed the experiment and then Jane agreed to do it as well. In doing this experiment Jane learned that people noticed that we smelled but that they didn't think we were disgusting or unhygienic.

Finally, Jane practiced a number of ERP tasks that she had previously avoided. For example, she did not wear deodorant to her PE class in which she had to get hot and sweaty, re-wore her clothes and pyjamas several times and got dressed without washing first.

8.1.3 Sessions 13 and 14: Relapse Prevention

In the final two sessions we developed a relapse prevention plan. We first discussed the possibility that OCD might try to come back into Jane's life again and identified circumstances that might trigger OCD in the future. We identified what the early warning signs would be for Jane and how people in her family could help her to fight back OCD. We identified the OCD symptoms that would be most likely to return. These included: (1) compulsive hand-washing; (2) wearing excessive deodorant; (3) avoiding getting dressed without washing first and (4) having to arrange things so that they are 'just right.' We designed ERP tasks that Jane could practice until her follow-up appointment the following month, in order to help to prevent these symptoms.

9 Outcome

As can be seen from figure 1 below Jane's initial CY-BOCS score was in the moderately severe range for OCD (23/40). Jane's CY-BOCS score was 17/40 at mid-treatment (session 7) indicating a reduction in the severity of her OCD to the mild range. By the end of treatment, Jane's OCD symptoms were in the sub-clinical range (7/40). Jane made further gains post-treatment with her 3 month follow up score at 0/40 on the CY-BOCS.

In addition to significant changes in symptoms, Jane showed behavioural changes in keeping with her treatment goals. By the end of treatment she was spending less time in the shower and was able to attend school on time, though she was still occasionally late. She was also engaging in regular extra-curricular activities at the youth club and going to friend's houses. She aimed to go to summer camp following treatment.

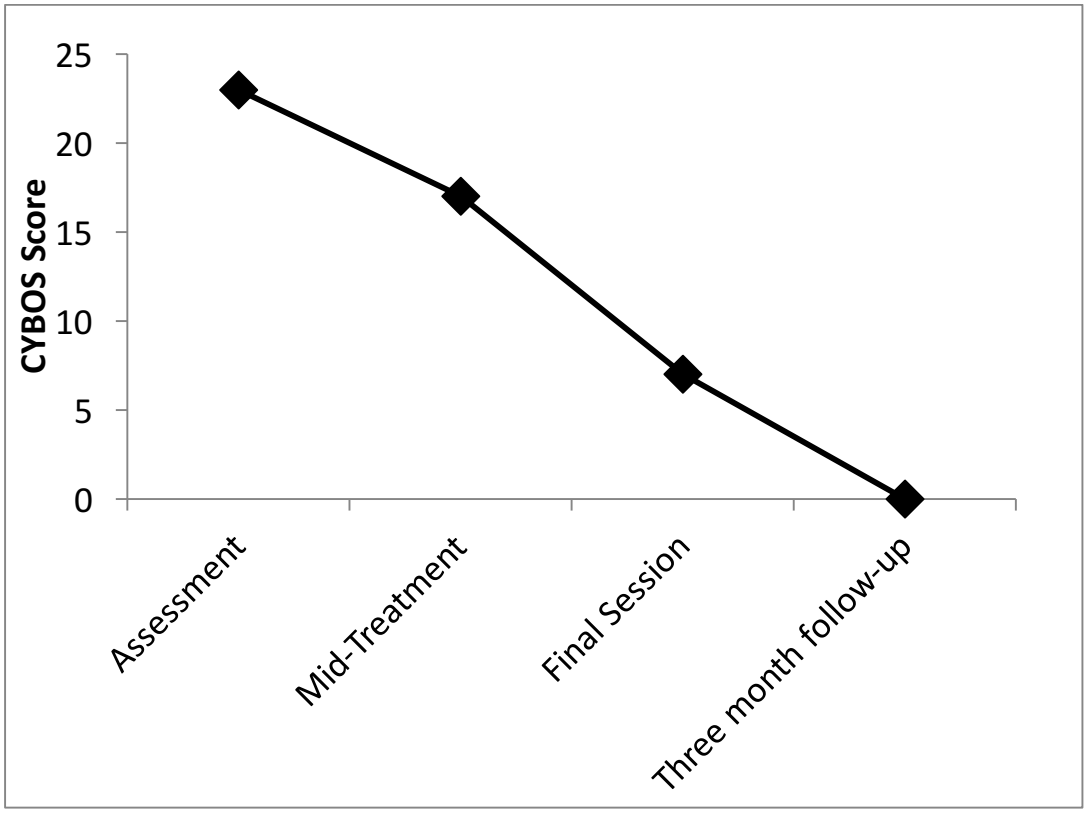

Figure 2 CY-BOCS Scores

10 Discussion

10.1 The therapeutic relationship: Working with Jane and her father

Jane was friendly and was motivated to engage in treatment and we were able to form a good working relationship. We developed a team work approach to tackling her OCD, with Jane, Jane's father and myself working together to fight back OCD. Jane had a good sense of humour and this helped her to do some of the more difficult tasks. At times there was some tension between Jane and her father, when she had not completed certain homework tasks and it was difficult to distinguish between her desire to establish her independence as an adolescent and her avoidance of doing certain ERP tasks.

10.2 Using a 'Five P's' Formulation

Developing the "Five P's" formulation helped to identify ways in which to overcome potential barriers to treatment. The formulation highlighted that it was important to do regular CBT with in vivo ERP, and have her father involved in the sessions as it was likely that the absence of these had been a barrier to her treatment in the past. It also helped me to keep in mind Jane's acquiescent personal style and her eagerness to please. The formulation was revised during treatment as it became apparent that she avoided doing ERP tasks that involved re-wearing clothes and not wearing deodorant and had associated cognitive distortions about the consequences of smelling. In addition the formulation highlighted the need to be alert to family accommodation of her behaviours, in particular by her father, and to discuss this in session.

10.3 Manualised treatment for OCD and treatment of ORS

The manualised treatment protocol used at the N&S OCD service was used to guide Jane's treatment. This helped to ensure that her treatment was in line with the evidence base, for example ensuring that ERP was completed in each session. However, additional cognitive strategies, as described above, were used to help to address some of Jane's more distressing symptoms that were in line with ORS. There is very little evidence available to guide the treatment of ORS. However, as Jane responded well to ERP for OCD, CBT with ERP and additional cognitive strategies were used to address her ORS symptoms.

10.4 Limitations

An important limitation of the present study is that only one baseline measurement of OCD symptoms was taken, i.e. at the initial assessment. As such it is not possible to report whether or not Jane's had shown any changes between assessment and treatment. An additional CY-BOCS assessment at the first treatment session would have helped to clarify whether there were any changes in the severity of her symptoms between assessment and treatment.

There was no measure available to examine symptoms of ORS separately to OCD. Though items on the CY-BOCS include symptoms of ORS, it may be that this measure does not fully capture the symptoms of ORS. As such, it may be that though Jane's OCD symptoms showed a significant improvement, she may still be suffering from some symptoms of ORS. However, it is also important to note that Jane's positive outcome was also reflected in her ability to achieve a number of her treatment goals by the end of treatment.

10.5 Reflections

Although my supervisor was present for the initial sessions, Jane was the first client with whom I worked independently for the majority of treatment, as this was my first placement. As such I think that I was quite anxious during our initial sessions. I found it difficult to put Jane in anxiety provoking situations and was worried about the consequences if something went wrong. I was also very aware of her father's presence what he might think if an exposure task did not go well. As a result, I think that I may not have challenged Jane as much as I could have at the beginning of treatment. However, this may not have hindered her improvement and may have been beneficial in terms of establishing a good therapeutic relationship and laying the foundation for further work.

As part of the treatment protocol at the N&S OCD service, the young people are seen together with one or both of their parents. On reflection, I think that including Jane's father in some of the treatment sessions was helpful in supporting her through the initial stages of treatment and in helping to address family accommodation of her symptoms. However, I wonder if including Jane's father in all of treatment sessions was optimal for her. She was becoming an adolescent and was beginning to establish her independence. She may have felt more empowered to take responsibility for herself had she been seen individually. In addition, at times it seemed that she did not fully disclose her concerns and it may have been that it was difficult for her to discuss some of her concerns openly, in the presence of her father.

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Appendices

Appendix A: Jane's Obsessions and Compulsions

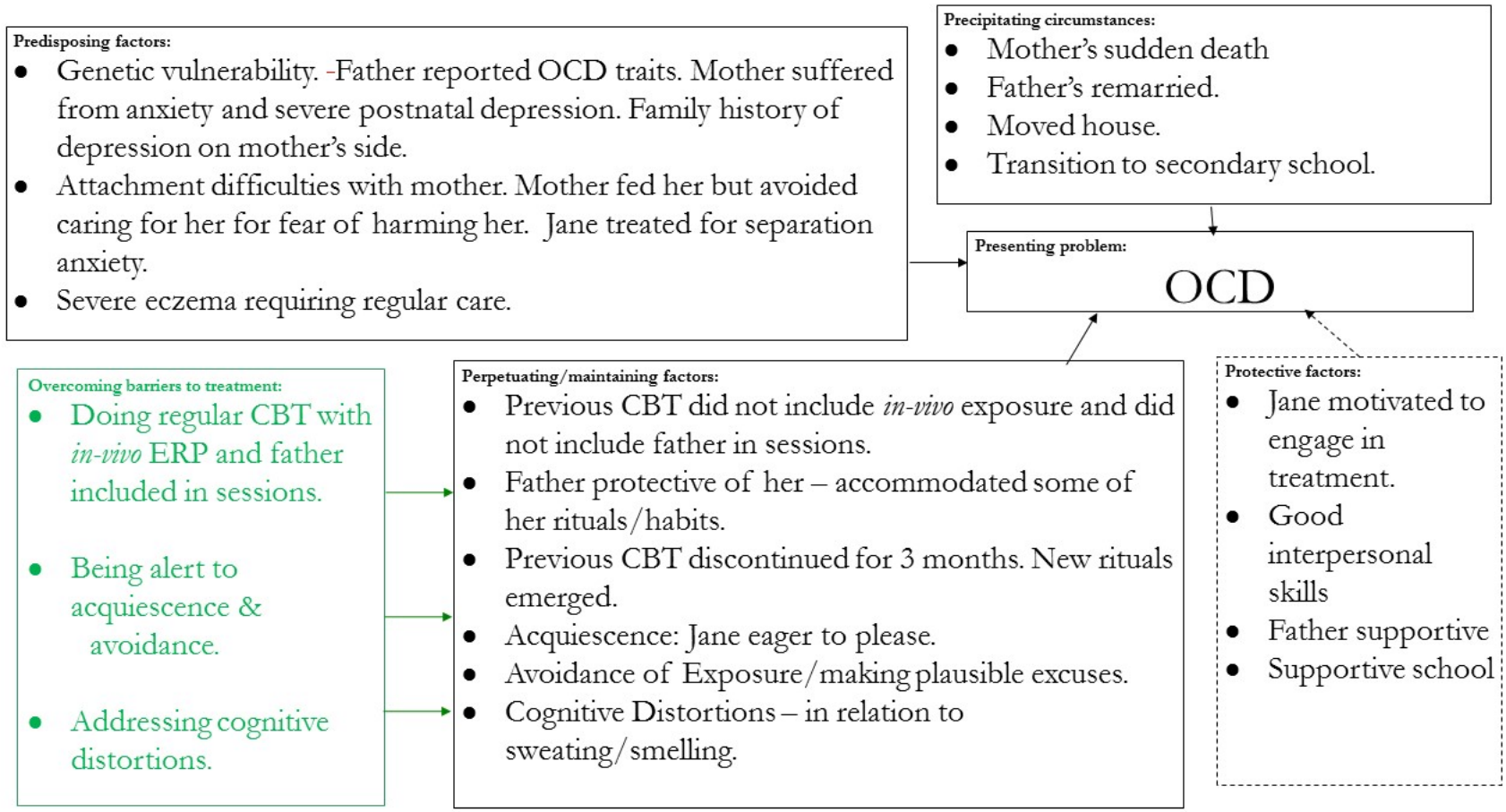
Jane's Obsessions

- Fear of contamination
- Worry that she or her loved ones would become unwell or die
- Worry that she would be responsible for something bad happening (e.g. a fire in the family home)
- Worry that she could be incontinent,
- Worry that she smelled bad
- Concern about being dirty or sweaty.

Jane's Compulsions

- Ritualised showering
- Spending up to 1 ½ hours applying emollient for her eczema
- Ritualised tooth brushing and hand washing
- Arranging objects and fixing her hair so that it was 'just right,'
- Checking, touching and patting objects,
- Wearing excessive deodorant which was applied in a ritualised way
- Changing her clothes and pyjamas daily
- Changing her bed-sheets on a certain day of the week

Appendix B: Five P's Formulation



Appendix C: Survey Questions

1. Do you wear deodorant? If so, how often?

2. How would you feel if you didn't wear deodorant for a day?

3. Would you worry about smelling if you didn't wear deodorant?

4. What would you think if you noticed that a friend of yours smelled of body odour?

5. If a friend of yours smelled would you think he/she was unhygienic?

6. If a friend of yours smelled would you think he/she was disgusting?

7. If a friend of yours smelled would it change how much you like him/her?

Case Study B

A neuropsychological assessment of cognitive function in Multiple Sclerosis

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Supervised by Dr. Lidia Yaguez

Institute of Psychiatry, Psychology and Neuroscience

November 2014

1 Contents

2 Abstract

This case report describes the neuropsychological assessment of a woman in her early forties who was suffering from Multiple Sclerosis (MS). The assessment results indicated a general decline in her intellectual functioning, as well as difficulties with memory and executive function, that were consistent with her self-reported problems in everyday functioning. The cognitive impairments are in keeping with the cognitive changes associated with MS. In addition, a long-standing history of mood difficulties as well as long-term cannabis use, may have further impacted on her cognitive ability. The assessment is discussed in terms of potential confounding factors, limitations and my reflections on the case.

3 Literature Review

3.1 Multiple Sclerosis (MS)

Multiple Sclerosis (MS) is a chronic, autoimmune, degenerative disease which affects the brain and spinal cord of the central nervous system (CNS) (Compston & Coles, 2008). Symptoms vary considerably, depending upon the area of the CNS affected. Common symptoms include weakness, stiffness or incoordination of the limbs, gait disturbance, visual impairments, bladder and bowel problems, sensory changes, heat sensitivity, fatigue and sexual dysfunction. Cognitive symptoms typically involve impaired attentional processes, memory and executive functions (Lezak, 2004). Disorders of affect and behaviour are also common (Paparrigopoulos, Ferentinos, Kouzoupis, Koutsis, & Papadimitriou, 2010). MS is typically characterised by relapses and remissions in its' early course, with a progressive accumulation of neurological deficits, and marked cognitive, behavioural and physical impairment later in its' course (Lezak, 2004).

There are approximately 107,000 people with MS in the UK, with one in every 600 people in the UK living with a diagnosis of the condition (Mackenzie, Morant, Bloomfield, MacDonald, & O'Riordan, 2013). MS is almost three times more common in women than in men and unlike other neurodegenerative conditions, onset usually occurs early in adult life, with the mean age of onset between 30 and 37 years of age, depending upon the disorder subtype (Confavreux, Aimard, & Devic, 1980). Risk factors for the condition include genetic predisposition (Lill, 2014) and environmental factors such as emotional stress associated with negative life events (Warren, Greenhill, & Warren, 1982).

3.1.1 Course and diagnosis

Approximately 80% of cases are characterised by 'relapsing-remitting' MS symptoms (Lezak, 2004). In these cases MS begins with an 'attack' followed by a period of recovery, with subsequent relapses and periods of improvement. Relapsing-remitting MS is diagnosed when there have been at least two attacks as

well as neurological signs implicating at least two regions of the CNS. In approximately 20% of cases the course is progressive, with either no relapses or remissions (primary progressive MS) or occasional relapse and a progressive course (progressive relapsing MS). Progressive forms of MS are diagnosed when there is clinical and laboratory (e.g. MRI) evidence of impairment for at least a year (Lezak, 2004).

3.1.2 Sensorimotor Symptoms

Motor symptoms are extremely common with 80-90% of patients experiencing limb weakness, spasticity and/or incoordination (Lezak, 2004). Sensory dysfunction including tingling and painful sensations are also experienced by most patients (Lezak, 2004). Approximately two-thirds of MS patients have visual impairments that may include blurred or double vision, total or partial loss of vision, loss of colour perception, impaired contrast sensitivity and impaired ability to process individual features of visual stimuli (Lezak, 2004). In addition patients may experience auditory dysfunction and impaired sense of smell (Lezak, 2004).

3.1.3 Cognition in MS

Estimates suggest that approximately 43 % of MS patients show cognitive dysfunction on comprehensive neuropsychological assessment batteries (Rao, Leo, Bernardin, & Unverzagt, 1991). Both relapsing-remitting and progressive forms of MS are characterised by significant neuropsychological impairment, relative to controls, but chronic-progressive MS is associated with greater impairment than the relapsing-remitting form of the condition.

Language abilities typically remain intact in MS, though verbal fluency is often disrupted, potentially owing to deficits in processing speed, flexibility or search strategies (Lezak, 2004). Patients often perform poorly on tests of visuospatial abilities, however their performance on these tasks should be interpreted with caution as these tests require a range of abilities including visual and visuospatial perception, executive functions, memory and speed of motor output (Fennell & Smith, 1990).

Impaired processing speed is a cardinal feature of MS (Archibald & Fisk, 2000; Beatty, Goodkin, Monson, Beatty, & Hertsgaard, 1988). Auditory and visual span are normal in most MS patients, performance on tests of selective attention varies depending on task demands and the patients' presentation (Lezak, 2004). Response inhibition (Rao et al., 1991) and attention switching (Grigsby, Kaye, & Busenbark, 1994) are also commonly impaired in MS.

Impaired problem solving has been reported in numerous studies and is thought to be due to a deficit in concept formation, i.e. generating new strategies, rather than perseveration (Beatty & Monson, 1996). Difficulties in planning and sequencing, monitoring and self- regulation are also commonly reported in MS (Lezak, 2004). These difficulties are often reported by friends and relatives and may not be apparent to the affected individual (Lezak, 2004).

MS patients frequently show impairments on tests of verbal and visual memory. The evidence suggests that memory difficulties may be accounted for my impairments in the acquisition of new information (Gaudino, Chiaravalloti, DeLuca, & Diamond, 2001). Indeed, MS patients are commonly impaired on tests of multi-trial learning, and short-term memory impairments are often reported by patients, whereas semantic memory may be intact (Lezak, 2004). Deficits in attention and working memory are thought to contribute to learning difficulties among patients with the condition (Gaudino et al., 2001).

3.1.4 Psychological consequences of MS

Unlike other neurodegenerative conditions MS, is typically diagnosed in working age adults and affects their quality of life in numerous ways including their employability, their ability to drive, their social lives, their ability to perform basic tasks in the home and their independence (Amato et al., 2001; Rao et al., 1991). Neuropsychiatric symptoms are commonly reported with major depression affecting 50% of individuals (Paparrigopoulos et al., 2010). Fatigue, sleep disorders,

bipolar disorder, euphoria, pathological laughing and crying, anxiety, psychosis and personality changes have also been reported among affected individuals (Paparrigopoulos et al., 2010).

4 Case Description

4.1 Referral

Mrs Alavi was a woman in her early forties, referred for neuropsychological assessment by her Consultant Neurologist as she reported having problems with her memory. She had a diagnosis of relapsing-remitting MS but not had any recent relapses.

4.2 Assessment

The assessment was done in two parts to allow for an in-depth assessment of Mrs Alavi's cognitive abilities. Both assessments took place in the morning, over the course of approximately 2-3 hours. At the first assessment a detailed history was taken, followed by neuropsychological examination. At the second assessment, a brief interview was carried out to update on any changes since the first assessment. This was followed up by further examination.

4.3 Relevant Background

Mrs Alavi was born in the Middle East. She came to the UK in the 1980's, when she was fourteen years old. Her parents stayed in the Middle East and she joined her sister who was already in the UK. She described this as a very difficult and lonely time for her.

Mrs Alavi began her education through English at fourteen years of age. She said that she had studied Maths, Physics and Chemistry for her A-Levels and initially failed the exams but repeated them. She studied Psychology, Sociology and Politics at University, obtaining a BA after four years, having taken a year's break. She completed a Masters in International Business and worked as a Personal Assistant

in the City. However, she realised that this was not a profession that suited her. She then worked in the voluntary sector for a number of years. She stopped working about six years ago as she wanted to have a child.

Mrs Alavi was diagnosed with Trigeminal Neuralgia (TN) approximately four years ago. TN is a rare and early symptom of MS which causes painful sensations in the jaw or face, ranging from a constant ache to a sudden intense stabbing pain in the jaw or face.

Following diagnosis of the condition, Mrs Alavi experienced seizures for which she was hospitalised for six days whilst on holidays in New York. She explained that she blacked out and has no memory of what happened. She said that she responded to treatment with steroids and Kappra.

At the time of assessment, Mrs Alavi lived with her husband and had no children. She did not work but had started a course in Psychotherapy. However, she said that she had not seen a client in three years and was struggling to complete her studies.

4.4 Presenting Difficulties

Mrs Alavi reported that she had memory problems and 'brain fog' since being diagnosed with MS and experiencing seizures in New York. She said that she often felt 'chaotic,' had difficulty remembering words and doing basic maths, even though she studied maths at A Level.

Mrs Alavi said that she suffered from anxiety and depression since moving to the UK as a teenager. She said that she had therapy 'on and off' for 10 years. She had experienced panic attacks for which she had received Cognitive Behaviour Therapy (CBT). She had also received therapy for trauma.

Mrs Alavi said that she smoked cannabis for most of her adult life but that she did not drink alcohol. She described her sleep and appetite as stable at the time of assessment but said that she had lost weight and suffered from insomnia in the past.

At the second assessment Mrs Alavi reported that she had experienced numbness in her legs the previous month and had been very anxious about a possible relapse. However, she had seen her neurologist who had reassured her of the treatment that could be provided in the case of relapse. She also reported that she was concerned about cognitive changes and of possible dementia.

Mrs Alavi also explained that she had go lost on her way home from the first assessment. She said that she was confused about the bus numbers and was feeling low in confidence and self-esteem after the assessment as she knew that she had not performed very well.

4.5 Measures

The measures used are listed below. A full description of the measures can be found in Appendix A.

4.5.1 General Intellectual Functioning

Test of Premorbid Functioning (TOPF; Wechsler, 2009).

Wechsler Adult Intelligence Scale (WAIS-IV; Wechsler, 2008).

4.5.2 Memory

Wechsler Memory Scale (WMS-IV; (Wechsler, 2009b).

Hopkins Verbal Learning Test (HVLT; Benedict, Schretlen, Groninger, & Brandt, 1998).

Doors and People (Baddeley, Wilson, & Kopelman, 1995).

Benton Visual Retention Test (Benton, 1992).

4.5.3 Executive Functions

- *Trail Making Test* (Reitan, 1993)

- *Benton Controlled Oral Word Association Test – FAS Test* (Ruff, Light, Parker, & Levin, 1996)
- *Hayling and Brixton assessment of dysexecutive symptoms* (Burgess & Shallice, 1997)
- *BADS- ZOO Map Test: Zoo map* (Norris & Tate, 2000)
- *STROOP* (Stroop, 1935)

4.5.4 Visual and Spatial Perception

- *Visual Object and Space Perception (VOSP;* (Warrington & James, 1991)

4.5.5 Self-report Measures

- The Dysexecutive Questionnaire (DEX) (Norris & Tate, 2000).
- The Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983).

4.6 Assessment Results

Below is a summary of the test results. Details of the assessment results can be found in Appendix B.

4.6.1 Behaviour during the Assessment

Mrs Alavi came alone to the assessments. She was generally cooperative and answered questions but found it difficult to engage at times and became upset and frustrated with her performance, needing encouragement to complete a number of the tasks. She reported fatigue and headache during the first assessment but said that she was less fatigued at the second assessment, as she had had a good night's sleep beforehand. However, during the second assessment she again became upset and frustrated and was disinhibited at times. However, she was aware that her behaviour was inappropriate and apologised afterwards.

4.6.2 General Intellectual Functioning

Mrs Alavi's estimated optimal level of cognitive functioning placed her in the average range. At the time of assessment she was functioning below this level, at the lower end of the low average range for her verbal comprehension, as well as for

her perceptual reasoning. Her full scale IQ was below average and significantly below her estimated optimal level of functioning.

4.6.3 Memory

Mrs Alavi's attention span was in the average range. Her visual and verbal working memory were impaired. Her verbal learning, as well as her verbal short and long term memory and were also impaired. Her visual memory performance was impaired, with impaired ability to recognise and reproduce items.

4.6.4 Executive Functions

Mrs Alavi had difficulty with word fluency, psychomotor speed and information processing, attention switching, rule learning, planning, and self-monitoring, performing in the impaired range in these domains. However, she did not show a significant difficulty with cognitive flexibility. She had below average speed of response initiation, though she performed in the average range for verbal response suppression.

4.6.5 Visual and Spatial Perception

Mrs Alavi's visual acuity and spatial perception were intact. She had some difficulty with object perception; she had problems recognising objects from their silhouettes, though she was able to recognise them when they were contrasted with non-objects.

4.6.6 Self-reported Mood and Executive symptoms

Mrs Alavi did not report significant dysexecutive symptoms, nor did she report current anxiety or depression.

4.6.7 Interpretation

Mrs Alavi's estimated optimal level of cognitive functioning was in the average range. However, due to the fact that her first language is not English and the test used was a verbal reading test, it is possible that her optimal cognitive level was

underestimated. She was nevertheless functioning below this estimated optimal level in terms of her general intellectual functioning.

In relation to executive functions, Mrs Alavi's word fluency, psychomotor speed of information processing, attention switching, rule learning, planning and speed of response initiation were impaired. She did not show a significant difficulty with cognitive flexibility or verbal response suppression. Although her attention span was within the norm, her memory in general was impaired; visual and verbal working memory as well as verbal learning, verbal short and long term memory and visual free recall and recognition memory.

It is worth noting that some of Mrs Alavi's impairments on the tests described above may in part be attributed to fatigue and/or distractibility. For example, she reported that she could not remember anything about the second story read to her during the Logical Memory test as her mind had gone blank whilst it was being read to her. In addition, language factors need to be taken into account when interpreting these results. However, given that she showed impairments on visual and spatial tests of memory and executive functioning, and that she spoke English fluently, it is unlikely that language factors explain these impairments. Finally, although she did not have a difficulty with visual or spatial perception the results of this assessment suggest that she may have difficulties with some aspects of object perception, which may have further impacted upon her performance on tests that required object perception such as the 'Doors' test.

4.6.8 Recommendations and Feedback

It was recommended to re-assess her in a year's time to monitor any changes. As per Mrs Alavi requests feedback was provided in the form of a letter.

5 Discussion

5.1 Confounding Factors

A number of potential confounding factors should be taken into account when interpreting the results of this assessment. Firstly, Mrs Alavi reported having longstanding mental health difficulties, in terms of both anxiety and depression. Depression has been associated with cognitive deficits including poor performance on tests of verbal learning and recall, attention, timed executive function and complex psychomotor tasks (Zakzanis, Leach, & Kaplan, 1998). Anxiety has also been associated with poor performance on tests of learning and memory (Kizilbash, Vanderploeg, & Curtiss, 2002). Mrs Alavi did not report significant anxiety or depression at the time of assessment, therefore these factors may have had a limited impact on her performance. Though she may have experienced test anxiety, with associated intrusive thoughts that could have been a source of distraction, the evidence suggests that test anxiety has a minimal impact on well validated measures of intelligence and neuropsychological functioning (Gass & Curiel, 2011). It is therefore unlikely that anxiety or depression could account for the cognitive deficits seen across numerous cognitive domains in this case, though they may have contributed to her test performance.

Mrs Alavi's non-cognitive MS symptoms could potentially have further impacted upon her test performance. As discussed above, MS is associated with motor problems and sensory changes including visual and hearing impairments. She did not report any sensory or motor difficulties and did not show evidence of a deficit in visual acuity. However, she had difficulty with subtle aspects of object perception as discussed above. She also reported fatigue, which is a common symptom of MS and said that she had a very bad headache on the first day of testing. It is therefore possible that these factors had a negative impact on her performance.

Mrs Alavi reported a long-standing history of smoking cannabis on a daily basis. Prospective studies have shown that persistent cannabis use has been associated with verbal IQ deficits and impairments in learning, memory, and executive

functioning (Meier et al., 2012). These cognitive changes interfere with everyday cognitive functioning and persist after one year cessation (Meier et al., 2012). Therefore, in addition to the effects of MS on her cognitive functioning, Mrs Alavi's long-term cannabis use may have further impacted upon her cognitive abilities.

5.2 Limitations

One of the limitations of the current study is associated with the difficulty in assessing premorbid ability among non-native English speakers. Tests of premorbid ability such as the TOPF (Wechsler, 2009) used in the current assessment, are based on verbal reading ability and therefore may not accurately measure the premorbid ability of non-native English speakers. In order to address the limitation associated with this instrument, a comprehensive assessment of the examinee's educational level was obtained. This suggested that her premorbid ability was likely to have been higher than that estimated by the TOPF.

A further limitation pertains to the assessment of dysexecutive symptoms. Mrs Alavi did not report dysexecutive symptoms on the DEX questionnaire (Norris & Tate, 2000), but showed a number of dysexcutive symptoms during the assessment. It has been reported that relatives and friends are more likely to report dysexecutive problems than the patient themselves (Lezak, 2004). On reflection, it would have been beneficial to have asked Mrs Alavi's husband to complete the informant version of the DEX questionnaire to have a more comprehensive understanding of her dysexecutive symptoms in everyday life.

Finally, the HADS (Zigmond & Snaith, 1983) was used to examine Mrs Alavi's current anxiety and depression. She did not report significant symptoms of anxiety or depression at the time of assessment. However, she reported that she had been feeling very anxious a month previously. It may have been beneficial to use additional measures of anxiety and depression to obtain a more comprehensive measure of her mood difficulties.

5.3 Conclusions

Mrs Alavi's cognitive difficulties are in keeping with the cognitive changes known to be associated with MS (see section 3.1.3) and suggest that the condition was impacting on her cognitive functioning. Additional factors such as a history of mental health problems, non-cognitive MS symptoms and prolonged cannabis use, potentially further contributed to her cognitive difficulties. A repeat assessment in a year's time will help to clarify whether these cognitive changes are stable or have deteriorated further, which would be consistent with the diagnosis of MS. On the other hand, an improvement would suggest that factors such as anxiety and fatigue may have impacted upon her functioning during the assessments described above.

5.4 Reflections

This was an interesting yet challenging assessment to carry out and interpret. Mrs Alavi became angry and frustrated during the assessment and it was difficult keep her motivated at times. Though I did not give any feedback during the assessment, she was aware that she was not performing well on the tests and was distressed by her performance. She was distracted at times and though I tried to keep her motivated and take breaks when necessary, I question whether there is more that I could have done to help her to reduce her distress and remain focused on the tasks.

On reflecting on this case, I thought about the impact that an enduring neurodegenerative condition such as MS can have on a person like Mrs Alavi. She had a very sad personal history and had had the added misfortune of developing a neurodegenerative condition at a time when she would have like to continue to develop professionally and have a family.

I further reflected on the role of neuropsychology in the assessment and treatment of people with conditions such as MS. As the results of this assessment show, neuropsychology can help to provide an explanation of everyday difficulties. For example, Mrs Alavi reported difficulties with her memory and this was reflected by the assessment results which showed memory impairments on test on verbal, visual and spatial memory. She also reported difficulties with doing day-to-day

calculations, which was reflected by impaired performance on the 'arithmetic' subtest of the WAIS-IV, due to poor working memory. Finally, her difficulty in finding her way home after the first assessment was reflected in her inability to plan a route on the 'zoo map' test, due to impairments in executive function. These results show how performance on neuropsychological tests are reflected in everyday difficulties. This can help to improve understanding of these problems for professionals as well as patients and their families

Unfortunately there are no specific guidelines for treating the cognitive impairments or psychological difficulties associated with MS (NICE, 2003). However, a review of the literature suggests that cognitive rehabilitation can be helpful, though effect sizes are small (Rosti-Otajärvi & Hämäläinen, 2011), and that Cognitive Behaviour Therapy for depression in MS can be beneficial (Hind et al., 2014). On reflection, I think that neuropsychology can play an important role in further developing the evidence base for these, as well as potentially other novel interventions, so that meaningful differences can be made to improve the quality of life for people living with the condition.

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Appendices

Appendix A: Description of neuropsychological test battery.

General Intellectual Functioning

Test of Premorbid Functioning (TOPF): The TOPF is composed of a list of 70 words that have atypical grapheme to phoneme translations. It provides an estimation of premorbid intellectual abilities.

Wechsler Adult Intelligence Scale (WAIS-IV): The WAIS-IV provides a measure of general intellectual functioning and contains scales examining verbal comprehension, perceptual reasoning, working memory and processing speed. Subtests used in the current assessment included 'Similarities', which examines abstract verbal reasoning, 'Vocabulary' which examines verbal expression on learned vocabulary, 'Block Design,' which examines spatial perception, processing and problem solving, 'Matrix Reasoning' which examines non-verbal abstract problem solving, 'Visual Puzzles,' which examines spatial reasoning, 'Digit Span' and 'Arithmetic' which examine working memory and 'Symbol Search' and 'Coding' which examine processing speed.

Memory

Wechsler Memory Scale (WMS-IV): The WMS-IV examines auditory and visual memory, visual working memory, and immediate and delayed memory. Subtests used in the current assessment included 'Logical Memory I and II', to examine immediate and delayed recall of two orally presented stories, 'Verbal Paired Associates, ' to examine verbal learning of word pairs, and 'Symbol Span' to examine visual working memory.

Hopkins Verbal Learning Test (HVLT): THE HVLT is a brief verbal learning test. It contains four nouns within three sematic categories, learned over three learning trials, with both immediate and delayed response conditions.

Doors and People: The Doors subtest was used to examine visual recognition. The participant is shown 12 different types of doors which they are then asked to recognise from a selection of similar doors. There are two conditions – low and high distraction.

Benton Visual Retention Test: The Benton Visual Retention Test is a test of immediate visual memory. The individual examined is shown 10 designs, one at a time, and asked to reproduce each one as exactly as possible.

Executive Functions

Trail Making Test: The Trail Making Test examines visual attention (including divided attention), visual search, speed of processing and cognitive flexibility. The subject is instructed to connect a set of 25 dots as fast as possible while maintaining accuracy. There are two parts to the test: A, in which examinee is asked to connect numbers in sequential order, and B, in which the examinee has to alternate between numbers and letters.

Controlled Oral Word Association Test – FAS Test: The Controlled Oral Word Association Test (COWAT) is a measure of verbal fluency and speed of processing. Examinees are asked to name as many words as possible beginning with one of the letters F, A and S within 1 minute.

Hayling and Brixton assessment of dysexecutive symptoms: The Hayling Test consists of two sets of 15 sentences each with the last word missing. In the first section the examinee has to complete the sentences, yielding a measure of speed of response initiation. In the second section the examinee is asked to complete the sentences with a word that does not fit, providing a measure of speed of processing and response suppression.

BADS- ZOO Map Test: Zoo map – The ZOO map test is a test of planning. It provides information about subjects' ability to plan a route to visit six of a possible 12 locations in a zoo, firstly in a demanding, open-ended situation, and secondly in a situation that involves following a concrete strategy.

STROOP: The STROOP is a measure of selective attention and cognitive flexibility. It measures perceptual set shifting and inhibition of habitual responses. In part one of the test the examinee reads randomised colour words printed in coloured ink, and in part 2 the examinee must read the colour of the ink and ignore the printed word. The examinee is instructed to perform the tasks as quickly as possible.

Visual and Spatial Perception

Visual Object and Space Perception (VOSP): The VOSP consists of eight tests each designed to assess a particular aspect of object or space perception, while minimising the involvement of other cognitive skills. The subtests used in the above study shall be described here: The *Shape Detection Screening* test is used to examine shape discrimination, providing a measure of more complex visual sensory processing than simple visual acuity. The *Silhouettes* subtest examines ability to identify an object from a minimal view, thereby providing a test of visual vocabulary. The *Object Decision* test requires the subject to identify a real object from three nonsense shapes, thereby providing a test of object identification that does not require a verbal response. The *Position Discrimination* subtest examines ability to perceive the relative position of objects in two dimensional space.

Self-report measures

Dysexecutive Questionnaire (DEX): This 20-item questionnaire samples dysexecutive symptoms in four broad areas: emotional or personality changes, motivational changes, behavioural changes and cognitive changes. Both self and informant report versions are available. The examinee is asked to read the 20 statements describing common problems of everyday life and to rate them according to their personal experience. Each item is scored on a 5-point scale according to its frequency from ‘‘never’’ to ‘‘very often.’’

Hospital Anxiety and Depression Scale (HADS) is a fourteen item self-report measure of anxiety and depression. Each item on the questionnaire is scored from 0-3 such that a person can score between 0 and 21 for either anxiety or depression.

Appendix B: Neuropsychological Assessment Summary

GENERAL INTELLECTUAL FUNCTIONING

TOPF

Raw Score: 52

Estimated Ability	Discrepancy (Obtained – Estimated)	Percentage population expected to equal or exceed discrepancy score.
FSIQ = 101	-33	0.04
VCI = 100	-20	2.28
PRI = 102	-22	6.85

WAIS-IV

Verbal Sub-tests	Scaled Scores	Perceptual Reasoning Sub-tests	Scaled Scores
Vocabulary	8	Block Design	5
Similarities	5	Matrix Reasoning	9
		Visual Puzzles	6

Processing Speed Sub-tests	Scaled Scores
Symbol Search	4
Coding	2

Tests	Sum of Scales Scores	IQ
Verbal	20*	81
Per. Reasoning	20	81
Working Memory	9	69
Processing Speed	6	62
Full Scale	53*	69

* Pro rated

MEMORY

WORKING MEMORY

WAIS-IV - DIGIT SPAN

Forward Span: 6 Backward Span: 3 Sequencing: 4
Scaled score: 7

WAIS-IV - ARITHMETIC

Scaled score = 2

WMS-IV – SYMBOL SPAN

Scaled Score = 6

VERBAL MEMORY

HVLT (B)
Total score: 16 (<1st *percentile)*
Trial 1: 4/12 (2nd *percentile*)
Trial 3: 5/12 (1st *percentile*)
Delayed recall: 4/12 (1st *percentile*)
Retention: 80% (*16th percentile*)

WMS- IV
Logical Memory 1: Scaled Score = 6
Logical Memory 2: Scaled Score = 6
Logical Memory 2 Recognition Cumulative Percent: <2

Verbal Paired Associates 1: Scaled Score = 7
Verbal Paired Associates 2: Scaled Score = 6
Verbal Paired Associates 2 Recognition Cumulative Percent: 17-25

Auditory Memory Index (AMI) Score = 78 (95% C.I. = 73-85); Percentile rank = 7

VISUAL MEMORY

DOORS AND PEOPLE

	Doors (a)	Doors (b)	Total
Age-scaled scores	5	4	4
Percentiles *1st-5th*	*5th*	*1st*	

BENTON VISUAL RETENTION TEST

Number Correct Score = 4 (Expected score = 8) Number of errors= 14 (expected= 3)

SPATIAL MEMORY

WMS-IV DESIGNS 1
Scaled Score = 1

EXECUTIVE FUNCTIONS

TRAIL MAKING TEST
Trails A 104 sec (<10th percentile)
Trails B 245 sec (<10th percentile)

FAS (oral)
Score: 24 (5th -8th Percentile)

HAYLING SENTENCE COMPLETION

Sensible completion Scaled score: 3
Unconnected completion Scaled score: 6
Errors Scaled score: 7

Total Scaled score: 5- Moderate Average

BRIXTON SPATIAL ANTICIPATION TEST

Total number of error=28 Scaled Score= 2- Abnormal

ZOO MAP TEST

Raw Score = 7 Profile Score = 1

STROOP

	Colour Task	Colour-Word Task
NR. Responses	93	49
Errors	1	1
Percentile	NA	<2%

VISUAL AND SPATIAL PERCEPTION

VOSP

Screening Test: 20/20 (Pass)

Object Perception	Raw Score	Pass/Fail
Silhouettes	9	Fail
Object Decision	18	Pass

Space Perception	Raw Score	Pass/Fail
Position Discrimination	20	Pass

SELF REPORTED MOOD AND EXECTUVE FUNCTION

DEX QUESTIONNAIRE

Raw Score: 16; Percentile 25%

HADS

Raw Scores: anxiety = 6/21; Depression = 5/21

Case Study C

Cognitive Behaviour Therapy for Health Anxiety with Panic Attacks in a Perinatal case in the Context of Difficult Social Circumstances

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1 Contents

2 List of Figures

3 Abstract

This case describes the assessment and treatment of a pregnant woman in her mid-twenties for health anxiety with panic attacks in the context of complex social circumstances. The study outlines definitions and cognitive behavioural models of health anxiety and panic disorder and then outlines evidence based treatments with reference to treatment recommendations for perinatal cases. In terms of assessment and treatment, Ms Rose attended two assessment appointments and four treatment sessions. It was decided to treat her panic attacks first, as this was in keeping with her treatment goals, and because her panic attacks were associated with high levels of distress and impairment in her day to day functioning. It was then intended to address her health concerns. Treatment sessions involved developing a formulation of her panic attacks and examining her beliefs about the causes of her panic symptoms. Ongoing risk issues were also assessed and managed in sessions. Unfortunately, Ms Rose disengaged from treatment and did not attend any subsequent postnatal appointments offered to her. Treatment was therefore was summarised in the form of an end of treatment letter. Potential reasons for her disengagement from treatment are discussed, followed by reflections on working with Ms Rose.

4 Literature Review

4.1 Definitions of Health Anxiety, Panic Attacks and Panic Disorder

Health anxiety, hypochondriasis, or 'Illness anxiety disorder' as classified under the DSM 5 (American Psychiatric Association, 2013), is characterised by a preoccupation that physical symptoms signify the presence of a serious illness, even when there is no medical evidence to support the presence of an illness (Wells, 1997). Patients focus on specific signs or symptoms which they attribute to the presence of a medical condition, for example, they may interpret a headache as meaning that they have a brain tumour (Olatunji et al., 2014). Prevalence estimates suggest that the condition is relatively rare with approximately 0.8% of the population meting criteria for hypochondriasis (Gureje, Ustün, & Simon, 1997).

A Panic Attack is a discrete period of intense fear or discomfort, during which a person experiences a number of symptoms (e.g. palpitations, a tight chest). The symptoms develop abruptly and peak within 10 minutes (American Psychiatric Association, 2013). Approximately 23% of people in the UK experience a panic attack during their lifetime (Kessler et al., 2006). A diagnosis of panic disorder is given to individuals who have repeated panic attacks, followed by at least one month of a fear of having further attacks, worry about the implications of attacks and/or a significant change in behaviour. (American Psychiatric Association, 2013). The prevalence of panic disorder in the UK is 3.7% (Kessler et al., 2006) and it is approximately twice as common among women than it is in men (Sheikh, Leskin, & Klein, 2002).

4.2 Distinguishing Health Anxiety and Panic Disorder

Cognitive theories propose that health anxiety and panic disorder both result from an enduring tendency to misinterpret bodily sensations as indicating catastrophic harm (Salkovskis & Clark, 1993). However, the two conditions can be distinguished at a number of levels (Salkovskis & Clark, 1993). Firstly, patients suffering from

panic disorder are more likely to misinterpret bodily sensations as signs of imminent disaster whereas patients with health anxiety concerns are more likely to concern long-term dangers. Secondly, patients with panic disorder are more likely to have a narrow focus of concern, misinterpreting sensations involved in the acute anxiety response, whereas those with health anxiety are more likely to interpret other sensations such as lumps and blemishes, as well as those involved in the anxiety response. Thirdly, patients with panic disorder are more likely to engage in escape and avoidance behaviours than those with health anxiety who are more likely to engage in reassurance and checking behaviours. Finally, those with panic disorder are more likely to have attitudes that concern the immediate negative impact of anxiety whereas those who have health anxiety are more concerned with the significance of physical symptoms and the effectiveness of medical attention (Salkovskis & Clark, 1993).

The evidence indicates that health anxiety and panic disorder are distinct clinical entities (Hiller, Leibbrand, Rief, & Fichter, 2005) but that there is a high level of comorbidity between the conditions, with estimates varying from approximately 13% to almost 50% (Bach, Nutzinger, & Hartl, 1996; Furer, Walker, Chartier, & Stein, 1997; Hiller et al., 2005). Salkovskis and Clark, (1993) suggest that in some patients panic attacks may be the initial problem but that their health concerns are not restricted to discrete panic episodes. These patients may become preoccupied with health and they may misinterpret non-autonomic symptoms. On the other hand, panic attacks may develop among patients who have health anxiety if they misinterpret autonomic sensations and their fear includes immediate catastrophes. As a result, a large proportion of patients will have a joint diagnosis of health anxiety and panic disorder (Salkovskis & Clark, 1993).

4.3 Cognitive models of Health Anxiety and Panic Disorder

According to Salkovskis (1989) health anxiety occurs when a critical incident, for example, the experience of unexpected physical symptoms or exposure to illness

related information, activates dysfunctional assumptions about health. Once activated these beliefs lead to the misinterpretation of sensations as evidence of serious physical pathology. This activates cognitive (e.g. selective attention, thinking errors), affective (e.g. depression, anger), behavioural (e.g. reassurance seeking, avoidance) and physiological (e.g. increased arousal, bodily sensations) maintenance mechanisms (Salkovskis, 1989).

Clark's (1986) cognitive model of panic disorder proposes that panic attacks are a result of the catastrophic misinterpretation of bodily sensations, which are usually involved in the normal anxiety response, as being much more dangerous than they really are. For example, palpitations may be misinterpreted as evidence of an impending heart attack. This misinterpretation of sensations increases the emotion (anxiety) which can lead to an exacerbation of the sensations, culminating in a vicious cycle of panic. As in health anxiety, panic disorder is maintained by a number of factors. These include selective attention leading to increased awareness of normal bodily sensations, and safety seeking behaviours which the person carries out with the belief that they will prevent the feared catastrophe from occurring (Salkovskis, 1991).

4.4 Cognitive Behaviour Therapy for Health Anxiety and Panic Disorder

Patients with comorbid health anxiety and panic disorder have higher levels of psychopathology than those with one or other condition (Hiller et al., 2005). In these cases it is recommended to firstly treat panic attacks before addressing health concerns (Wells, 1997). By treating the panic attacks first one can to socialise the person to the cognitive model before addressing more chronic health concerns.

There is a strong evidence base supporting the use of CBT for panic disorder(Clark et al., 1999; Clark et al., 1994; Clum, Clum, & Surls, 1993; Hofmann & Smits, 2008) and it is the first line of treatment as recommended by NICE (NICE, 2011). There is a growing evidence base for CBT for health anxiety, with a recent meta-analysis of 13

randomised controlled trials (RCTs) showing that CBT outperformed control conditions of both primary and secondary (e.g. depression) outcome measures (Olatunji et al., 2014).

4.5 The Treatment of Health Anxiety and Panic Attacks During Pregnancy

Mental health difficulties during pregnancy can have serious consequences for a mother and her infant (NICE, 2007). As such NICE recommend that women requiring psychological treatment should be seen for treatment within 1 month of the initial assessment, and no longer than 3 months afterwards. In terms of the treatment of anxiety disorders during pregnancy, NICE recommend considering withdrawing medication and trying CBT if this has not been tried.

5 Case Description

5.1 Referral and Assessment

Ms Rose was referred to psychology for assessment and treatment for health anxiety and panic attacks by the Consultant Psychiatrist at the Perinatal Community Mental Health Team. She was in her mid-twenties, had a three year old son and was seven months pregnant. She did not attend the first assessment appointment offered to her but attended two subsequent assessment appointments.

5.2 Presenting problem and history of the complaint

Ms Rose described feeling anxious every day and thinking that she was dying all of the time. She said that she believed that she had a brain tumour which had not yet been detected. She feared that by the time it would be found it would be too late to treat her. She was also afraid of having a heart attack. She said that she had panic attacks that hit her 'all at once.'

She first began to worry that she had a tumour or that there was something else seriously wrong with her when she started to experience headaches and dizziness, following Urinary Tract Infection, when she had stopped drinking coke. Extensive medical investigations had ruled out a physical cause for her symptoms. However, she continuously looked up her symptoms on the internet with the result that she would notice additional symptoms, which made her feel more worried.

Though she was looking forward to the birth of her baby she said that she was worried that she could die during childbirth, for example, by haemorrhaging or having a heart attack. She worried that she could have a panic attack during childbirth or that her high level of stress could bring about a premature labour. She also worried about her child being still born, that the umbilical cord could get caught around her neck, or that she could be born with a disability (as she was taking Clonazepam when she became pregnant).

She reported that she was also worried about her housing situation. She was living with her mother and sharing a room with her eleven and thirteen year old brothers, as well as her three year old son. Though her name was on the list for housing she said that she was afraid that she would be offered a house far from her mum's home as she feared she would 'pass out' and that there would be nobody there to look after her children.

6 Formulation

6.1 Five P's Formulation

A five P's formulation was developed during the assessment and shared with Ms Rose in the first treatment session, as part of her assessment letter. A summary of this formulation can be seen in appendix A.

6.1.1 Presenting Problem

As described above, Ms Rose experienced panic attacks and high levels of anxiety in relation to her health and to her family circumstances.

6.1.2 Predisposing Factors

Ms Rose experienced domestic violence during her childhood. She was strangled on one occasion and thought she was going to die. When her stepfather was violent towards her mother and younger siblings she would get involved to try to protect them.

6.1.3 Precipitating Circumstances

In the year prior to referral, Ms Rose was threatened with an eviction order. At the same time one of her brothers was accused of rape and her mother had an abnormal smear test result which led Ms Rose to worry that her mother could have cancer. She also had a Urinary Tract Infection (UTI) and had to stop drinking coke, which she believed had precipitated the onset of headaches.

7 Aims of treatment

Ms Rose was experiencing panic attacks in the context of health anxiety and a number of difficult life circumstances. A decision was made to treat her panic attacks first as this was in line with her treatment goals and because her panic attacks were associated with a high level of distress and impacted on her quality of life. It was hoped that this would also socialise her to the cognitive model and to a psychological understanding of her experience, before embarking upon treatment of her chronic health concerns.

8 Treatment Goals

Ms Rose's goals for treatment were to have fewer panic attacks, stop obsessive thoughts, be less afraid to move out of home and feel less worried about the birth of her baby.

9 Intervention

9.1 Psychoeducation

Psychoeducation involved discussing the common symptoms of anxiety, how the fight or flight response is a normal response to danger. Additional information in relation to some of her specific beliefs about her symptoms, was also provided. For example, Ms Rose believed that she was going to pass out in a panic attack because she felt light-headed. I therefore explained that during a panic attack, blood pressure actually increases such that one is less likely to collapse or faint.

9.2 Panic Formulation and Socialising to the model

In our first treatment session, Ms Rose described a recent example of a panic attack that she had had. She described getting ready for work, having a 'rush of anxiety' and noticing a 'floaty' feeling. She then thought, 'I know what's coming, I know it's

going to build up, I'm going to have a panic attack. She felt light headed and thought that she had a brain tumour. She noticed her vision going blurry and started hyperventilating. As the panic attack got worse she said that she lost her peripheral vision and got flashes and stars in her vision. She thought that there was something seriously wrong with her, that she was going blind and that she would 'pass out' or die.

From the panic attack described above we developed a 'panic cycle' and then used this to develop a general panic cycle to describe the thoughts, emotions and sensations she commonly experienced during a panic attack. We also included safety behaviours and avoidance behaviours in this formulation (see Appendix B). From this, Ms Rose developed an understanding of how her thoughts and behaviours were maintaining the symptoms she reported, and made them worse at times. We discussed ways in which to break the panic cycle by addressing the thoughts and behaviours that made her panic attacks worse and resulted in recurrent panic attacks.

9.3 Exploring Alternatives: Theory A, Theory B

We developed two alternative theories to explain her symptoms (Theory A and Theory B). According to 'Theory A' the problem was that that the symptoms meant that there was something physically wrong with her and that she was going to die. She believed this 100%. According to 'Theory B' the problem was that she *worried* that the sensations meant that there is something physically wrong with her and that she was going to die. She believed this 0%. We then looked for evidence to support both of these theories. We found evidence to support Theory B; (1) None of the neurological tests, eye tests, MRIs, ECGs or blood tests indicated a physical health condition and (2) the sensations that she was experiencing – tingling, head pressure, numbness – could be symptoms of a tumour but also of anxiety. This (2) could also be seen as evidence for Theory A, but we had no further evidence for Theory A.

9.4 Idiosyncratic Word Pair Associates

The first behavioural experiment that we carried out was the 'word pair associates' experiment based on her sensations and associated beliefs (see Appendix C). Before doing this exercise she rated her anxiety at 30% and after reading the statements her anxiety had risen to 60%. She reported feeling pressure in her head and that her heart was racing. When asked, she reported that she had not noticed the sensations before reading the words. Through a series of Socratic questions she realised that reading the words made her feel anxious and that this had caused her symptoms. As such, she realised that anxiety could cause the symptoms that she typically associated with having a brain tumour: this provided evidence for Theory B.

9.5 Exploring the relationship between Physical and Mental Health

Further Socratic questioning was used to explore the differences between symptoms of a tumour and of anxiety. Through this process, she realised that when she was distracted she completely forgot about the symptoms. As a result Ms Rose was able to reflect that the symptoms of a tumour could not 'come and go,' as in her experience, but would be there all of the time.

Ms Rose became upset after doing this exercise and explained that she felt like a 'weirdo' because she thought that she had no real reason to be anxious if she did not have a physical health problem. She also said that she thought that if it was a physical problem then someone could make her better but worried that if she had a mental health problem she would be 'fighting a losing battle'.

9.6 Ongoing Treatment Plan

The next step in treatment would have been to carry out behavioural experiments to provoke sensations associated with anxiety. These would have involved paying attention to bodily sensations and doing physical activity, to help her to realise that the sensations could be caused by factors other than physical health problems and that her feared catastrophe would not occur even if she did not engage in safety behaviours. Further behavioural experiments would have been designed with Ms Rose to test her beliefs about what would happen to her if she did things that she usually avoided (e.g. going to the shopping centre).

9.7 Managing Risk

Ms Rose lived in her mother's house where two of her brothers, one who was 18 and one who was 16, would often get into physical fights. Ms Rose said that when her brothers got into a fight she intervened because she could not stand to see her younger brother getting hurt. I tried to help her to understand the importance of keeping herself and her unborn baby safe. As this presented a potential risk issue, I spoke to the team about the level of risk involved in this case and it was agreed that I continue to assess the situation during each of our treatment sessions. At our final session she said that if her brothers got into a fight again, she would not get involved and would call the police if necessary. She also said that she wanted to put her own health first and get out of her negative home environment.

10 End of Treatment

There was a two week break in treatment due to leave. I prepared Ms Rose for this several weeks beforehand. Unfortunately, however, she did not attend the session that followed my return. I tried to call her on several occasions to arrange further appointments but her phone was continually out of service. I therefore sent her a letter offering another appointment. She was visited at home by one of the

community psychiatric nurses (CPN). She told the CPN that she would be attending the appointment with me but did not attend. Ms Rose then had her baby and I offered her one more post-natal appointment. As she did not attend this appointment, I wrote her an end of treatment letter to summarise the work that we had done together.

11 Outcomes

As part of the assessment, Ms Rose completed the Clinical Outcomes in Routine Evaluation Self Report Questionnaire, a measure of global distress. Mean scores on this questionnaire are in the range 0 – 4, with higher scores indicating more severe symptoms. Her mean score of 2.18 fell above the clinical cut-off for women of 1.29, consistent with her reported high level of psychological distress. She also completed the Panic Rating Scale (PRS), which showed that she had had three panic attacks in the past week and that these were markedly disturbing (6/8). She rated avoidance of situations due to fear of panic as moderate (4/8). I gave Ms Rose copies of the PRS to complete at home but unfortunately she did not bring these to our treatment sessions, saying that she had forgotten them at home. I also asked her for idiosyncratic ratings of her anxiety at each of the treatment sessions (see figure 1 below).

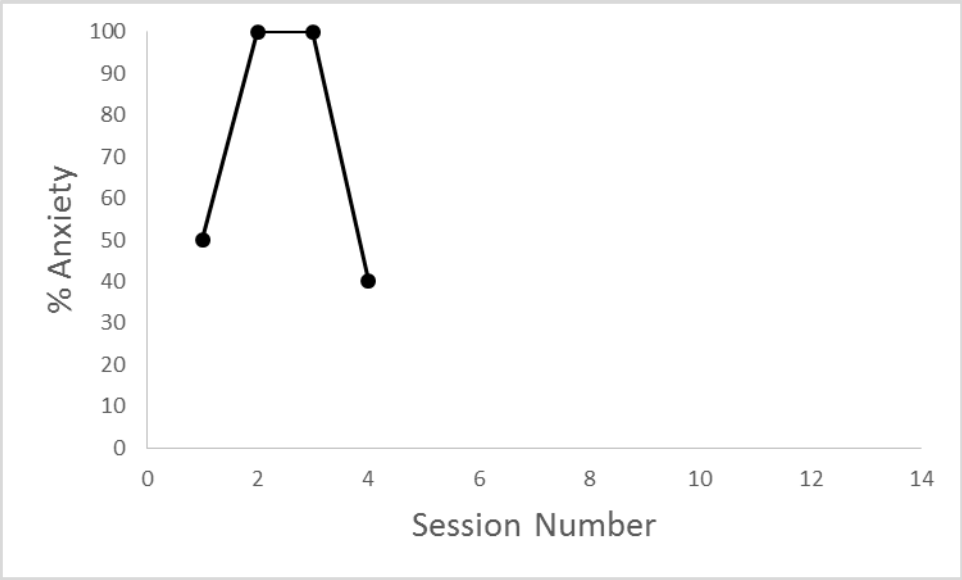

Figure 1 Session ratings. Session number is shown on the X-axis and percentage (%) anxiety is shown on the Y-axis. Blank spaces illustrate unattended sessions.

12 Discussion

12.1 Exploring potential reasons for disengagement

12.1.1 Commitment to treatment and the therapeutic relationship

I had the impression that Ms Rose and I had developed a good therapeutic relationship at the outset of treatment. She appeared motivated and engaged and was able to reflect on the content of the sessions between appointments. However, she did not provide any notice if she could not attend sessions or was going to be late. In addition, she did not bring the panic diaries that I asked her to complete between sessions. She was distressed when I explained to her that I would not be able to see her for two weeks, though she said that she was reassured that I had given her notice. When I returned from leave she did not attend any further appointments. As a result of Ms Rose's poor attendance, and the fact that she did not bring completed homework, I questioned her commitment to treatment. I also wondered if my going on leave was particularly difficult for her and if perhaps she was worried about becoming too dependent on therapy.

12.1.2 The potential impact of pregnancy and complicated social circumstances

Ms Rose was seven months pregnant when she attended the first of her assessment appointments. As treatment progressed, she was approaching the birth date of her second child. It may be that she was becoming more preoccupied with the approaching birth of her baby and that this was making it more difficult for her to attend sessions. On the other hand, she may have been feeling better as the birth-date approached and she may have felt that she no longer needed psychological therapy.

Another factor which I have reflected upon is the potential impact of managing risk in sessions. I wonder if perhaps Ms Rose became concerned that a referral would be made to social services if she disclosed potential risks to me.

12.1.3 Beliefs about physical and mental health problems

In our final session, Ms Rose expressed that she found it very upsetting to think of her difficulties as a mental health problem and that she would find it easier to accept that she had a physical health problem. I think that it would have been very helpful to explore her beliefs about mental health in greater depth, but unfortunately we never had the opportunity to do this. I wonder if these beliefs impacted on her disengagement from treatment.

12.2 Limitations

This case should be interpreted in the light of a number of important limitations. Although standardised measures were obtained at assessment, no further standardised measures were obtained during treatment. In addition, it was not possible to obtain post-treatment measures as Ms Rose disengaged before the end of treatment. Finally, I did not re-evaluate her beliefs in Theory A and Theory B after examining evidence or carrying out the paired associates tasks therefore I do not have a measure to quantify potential changes in her beliefs.

12.3 Reflections

There is a strong evidence base and a clear model for treating health anxiety with panic attacks. As such, I was eager to begin treatment with Ms Rose, feeling confident that she could improve, and was disappointed that she disengaged from treatment. I found it difficult to end therapy without any conclusions or

understanding of why she had disengaged. I think that this impacted on my confidence as a trainee and made me question if I could have done something more. However, I think that in working with Ms Rose, I learned to accept that some people may not be ready to engage in therapy, that there are many potential reasons for this and that sometimes endings may not be as conclusive one would hope or expect.

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Appendices

Appendix A: Five P's Formulation

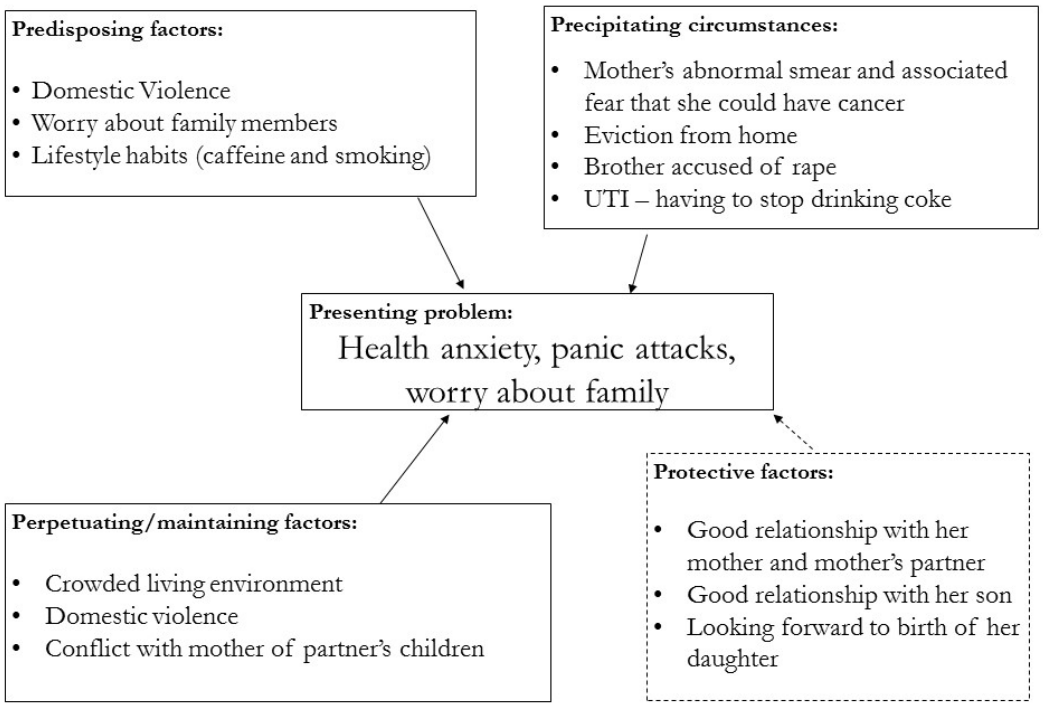

Figure 2. Five P's Formulation. Presenting problem, with predisposing, precipitating, perpetuating and protective factors.

Appendix B: Panic Formulation

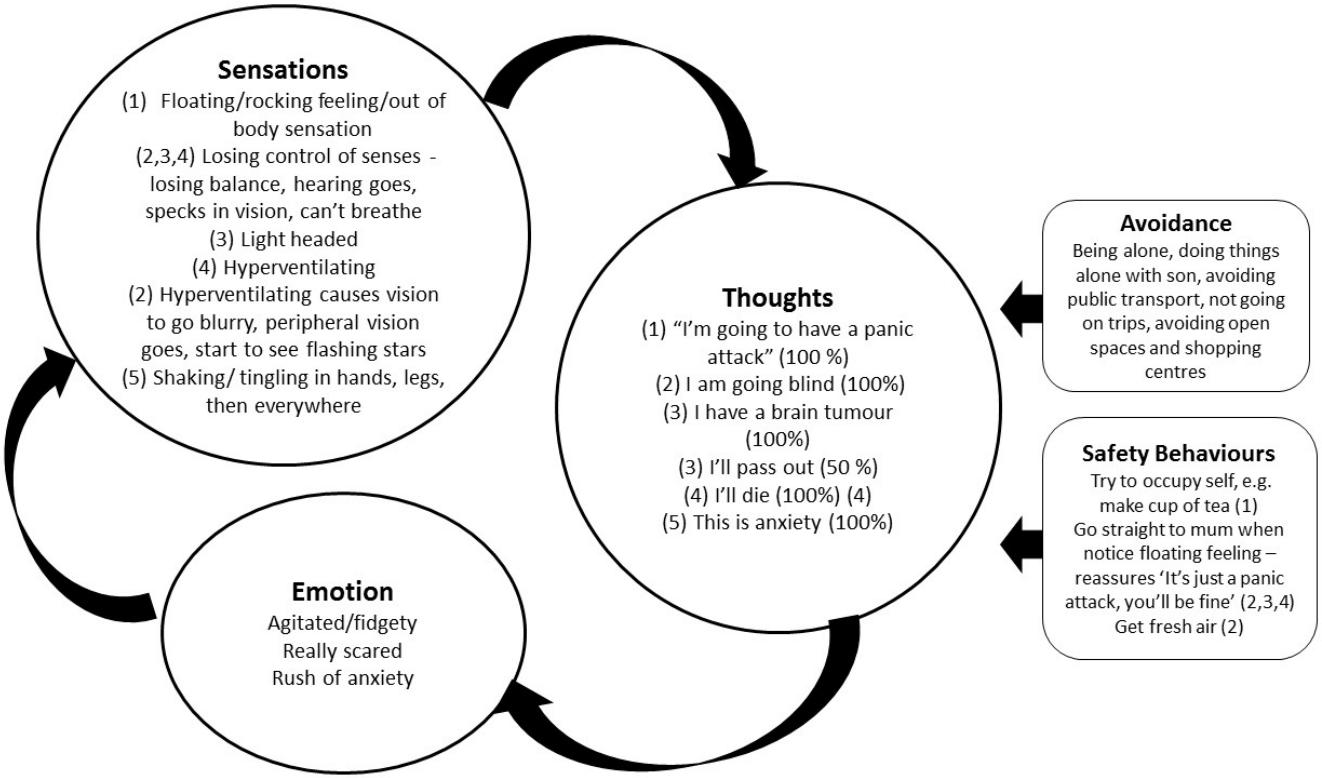

Figure 3 Panic Cycle Numbers in brackets refer to thoughts, associated sensations and safety behaviours. Percentages refer to belief ratings.

Appendix C: Idiosyncratic Word Pair Associates

Hyperventilating - dying

Light headed – brain tumour

Blurry vision – going blind

Can’t breath – pass out

Losing balance – brain tumour

Specks in vision – going blind

Can’t breath – pass out

Hyperventilating - dying

Light headed – brain tumour

Blurry vision – going blind

Seeing flashing stars - going blind

Losing hearing – brain tumour

Seeing flashing stars - going blind

Losing hearing – brain tumour

Losing balance – brain tumour

Specks in vision – going blind

Can’t breath – pass out

Hyperventilating - dying

Light headed – brain tumour

Blurry vision – going blind

Losing hearing – brain tumour

Case Study D

Assessment and Intervention for Anxiety and Depression with Somatic Symptoms in an Older Adult

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1 Contents

2 List of Figures

3 Abstract

This case study describes the assessment and treatment of a 68 year old woman for anxiety and depression, with somatic symptoms. An overview of anxiety, depression and somatic symptoms, as well as their treatment in older adults is first provided, followed by a brief outline of transdiagnostic CBT (tCBT). Ms Smith was seen for three assessment appointments and six treatment sessions, as well as a follow-up appointment. In working with Ms Smith, a tCBT approach was taken, focusing on the factors that were maintaining her anxiety, low energy, low mood and somatic symptoms. We first focused on helping her to re-establish healthy eating habits and then addressed her 'boom and bust' cycle of activity. We then thought about how best to manage the distress associated with her somatic symptoms. Finally, we introduced sleep hygiene practices for her to carry forward post treatment. An important part of therapy involved helping Ms Smith to develop strategies for self-care and relaxation. Assessment on standard measures showed that Ms Smith was experiencing clinically significant anxiety, depression and distress at assessment but was no longer suffering from these difficulties at follow-up. The study is discussed in relation to the treatment approaches used and the potential limitations of therapy, as well as my reflections on working with Ms Smith.

4 Literature Review

4.1 Anxiety and Depression in Older adults

The evidence suggests that anxiety and depression are common in later life. Prevalence estimates vary considerably for depression, with estimates between 0.4%-35% having been reported in community samples (Beekman, Copeland, & Prince, 1999). Although anxiety is common among older individuals, with prevalence estimates ranging from 3.2 – 14.2% for any anxiety disorder, these estimates suggest that anxiety is less prevalent in older adults than amongst working age adults (Wolitzky-Taylor, Castriotta, Lenze, Stanley, & Craske, 2010). The evidence also suggests that there are high rates of comorbidity between anxiety and depression amongst older adults (Beekman et al., 2000; Wolitzky-Taylor et al., 2010).

It has been proposed that anxiety and depression are underdiagnosed amongst older adults as older people may deny feeling anxious or depressed and may present with different symptoms, such as somatic complaints, insomnia, agitation and irritability in the case of depression (Allan, Valkanova, & Ebmeier, 2014; Bland, 2012). Similarly it is thought that anxiety may be under-detected among older adults as they differ in how they describe anxiety (Brenes, 2006) and may present with different symptoms including increased somatic complaints (Frazier, Waid, & Fincke, 2002a).

Risk factors for anxiety in older adults include being female, having a lower level of education, experiencing stressful life events, having experienced adverse events in childhood, being single, divorced or separated, and having a chronic medical condition (Wolitzky-Taylor et al., 2010). Similarly, female gender, adverse life events, being widowed or divorced and having physical health problems, as well as having a history of depression, are risk factors for depression among the elderly (Copeland, 1987; Murphy, 1982; Musetti et al., 1989).

4.2 Somatic Symptoms and Disorders

Somatic symptoms are bodily sensations such as pain, weakness, fatigue and nausea. Somatic symptom disorder (SSD) is characterized by intense focus on physical (somatic) symptoms that are very distressing or result in significant disruption of functioning. Regardless of whether symptoms are associated with a medical condition, a person with SSD will experience as excessive and disproportionate thoughts, feelings and behaviours regarding their symptoms (American Psychiatric Association, 2013).

Epidemiological research indicates that somatic disorders have a prevalence of approximately 0.1–0.2% in the general population (Kirmayer & Taillefer, 1997) and 5% in primary care settings (Lobo, Garcia-Campayo, Campos, Marcos, & Perez-Echeverria, 1996). Though the aetiology of somatic symptoms is poorly understood, research findings suggest that childhood abuse (Spitzer, Barnow, Gau, Freyberger, & Grabe, 2008), borderline personality traits (Sansone, Tahir, Buckner, & Wiederman, 2008) and interpersonal factors such as the 'unmet need for closeness with others' (Landa, Bossis, Boylan, & Wong, 2012) are associated with somatisation.

As described above somatic symptoms often present as part of anxiety and depression in later life (Allan et al., 2014; Frazier, Waid, & Fincke, 2002). There is a high prevalence of comorbidity between anxiety, depression and somatic symptom disorders (Bener, Al-Kazaz, Ftouni, Al-Harthy, & Dafeeah, 2013; de Waal, Arnold, Eekhof, & van Hemert, 2004). Differential diagnosis may, therefore, be complicated between anxiety, depression and SSD, especially among older adults where somatic symptoms commonly present as part of anxiety and depressive disorders.

4.3 Treatment for Anxiety, Depression and Somatic Symptoms in Older Adults

Cognitive Behaviour Therapy (CBT) is recommended by NICE for both anxiety disorders and depression (NICE, 2009; 2011). The evidence indicates that CBT for

anxiety and depression is superior to non-active control conditions among older adults and that relaxation training may be more effective than CBT in treating anxiety among older adults (Gould, Coulson, & Howard, 2012a, 2012b). Emerging evidence suggests that psychological therapies in general, and CBT more specifically, are effective in treating somatic symptom and related disorders (van Dessel et al., 2014).

4.4 Transdiagnostic CBT (tCBT)

Given the high level of psychological comorbidity reported in epidemiological studies (Kessler et al., 1994), it has been proposed that transdiagnostic CBT (tCBT), which seeks to address core cognitive and behavioural maintaining processes, that are shared among different psychological disorders, can have a beneficial impact on multiple psychological difficulties (Mansell, Harvey, Watkins, & Shafran, 2008). This approach may be particularly beneficial among older adults where high levels of psychological comorbidity have been reported (Beekman et al., 2000). Emerging evidence suggests that tCBT is effective in treating anxiety and depression in working age, and older adults (Ekkers et al., 2011; Titov et al., 2011).

5 Case Description

5.1 Referral and Assessment

Ms Smith was a 68 year old woman who was referred to the Psychology and Psychotherapy Service for assessment and treatment of anxiety and panic attacks by one of the junior doctors in the Older Adult Community Mental Health Team. She was also assessed by the Consultant Psychiatrist on the team, who was of the opinion that she was also suffering from depression. Following these assessments she was prescribed Mirtazapine.

The psychology assessment was carried out over three appointments. Mrs Z was highly anxious during the initial assessment appointment, which she attended with her partner. She came to all subsequent assessment and treatment appointments alone.

5.2 Presenting problem and history of the complaint

At the time of assessment Ms Smith explained that her main concern was that she experienced burning sensations in her face and head and that she constantly felt exhausted. She had begun to feel unwell about five months before the assessment. Though she had been referred for help with anxiety and panic attacks, she had not experienced a panic attack in two months and was no longer concerned by them.

Ms Smith said that she was constantly exhausted and that she thought that this was because she was not eating or sleeping well. She explained that she had never slept well but that she used to have a good appetite. She also explained that she had acid reflux and Barrett's Oesophagus but that these started before she became anxious and exhausted.

Ms Smith explained that she felt like she could not swallow her food because she felt sick in her stomach and thought her stomach was rejecting food. She sometimes thought that she was going to be sick, but that this never happened.

Ms Smith was very distressed by the burning sensations in her face, forehead and the top of her head. She said that these sensations started in her face and head and then moved down to her hips and legs. She said that she did not have any ideas as to what could be causing these sensations and had no specific fears that they could be indicative of a specific problem such as cancer or a tumour. She said that she thought that perhaps the sensations were due to a delayed menopause following discontinuation of HRT.

Ms Smith was very self-critical and repeatedly said that she was 'pissed off' with herself because she could not do all of the things that she used to do. She said that this was because she had no energy and no interest in doing basic things like cooking and cleaning, or the things that she used to enjoy, like visiting her daughters and shopping. She explained that she used to be afraid she would pass out and that this would stop her from doing things. She said that she was no longer afraid that she would pass out but that she no longer engaged in her regular activities because she had no energy.

5.3 Relevant History

Ms Smith was the eldest of eleven children. She said that her family life was 'fine' growing up and that she went to school until she was about thirteen years old. She came to the UK with her aunt when she was seventeen years old. A number of her siblings also came to live in the UK and her parents lived here for 15 years during the 1970s and 1980s.

Five of her siblings died over the years. One of her sisters died when she was three months old, when Ms Smith was about seven years old. This sister's twin brother died in a road accident and two of her sisters had died of cancer. She was very close to one of these sisters, who also lived in London.

More recently, another one of her brothers had died as a result of drowning and it was thought that he had taken his own life. Ms Smith said that she was very close to this brother as there were just three and a half years age difference between them

and he also lived in the UK. She described them going for lots of nights out together. She did not know that he was on antidepressants until after he died. She explained that she was absolutely devastated when he died and felt like she had lost part of herself. She didn't want to speak to anyone at the time, which was unusual for her as she was the one that everyone else in the family went to in a crisis.

In the same year, her aunt, with whom she came to the UK, died in a tragic accident. She described this aunt as having a 'heart of gold' and being like a mother to everyone in the family. She explained that her death was a big shock to the whole family.

Ms Smith was married for 15 years. Her husband was an alcoholic who was often verbally abusive to her and was also physically violent with her at times. They divorced and he subsequently died. At the time of assessment, she had been with her current partner for about eight years. She explained that they used to argue a lot, particularly after they had been drinking. They were arguing less at the time of assessment, however her partner said that he was having difficulty supporting her whilst she was unwell. Ms Smith had three children and four grandchildren. She had a good relationship with her children and was also close to one of her sisters who still lived in the UK.

Despite the difficult events in her life, Ms Smith said that she had never 'dwelled' on things. She had no history of anxiety or depression. However, she had had some talking therapy twice before at her G.P. practice when her current difficulties first started.

6 Measures

Ms Smith completed the Clinical Outcomes in Routine Evaluation-10 (CORE-10) and the Hospital Anxiety and Depression Scale (HADS).

7 Formulation

7.1 Five P's Formulation

A diagrammatic representation of this formulation can be seen in appendix A.

7.1.1 Presenting problem

Ms Smith was highly anxious and was experiencing low mood. Her principle concerns were that she was feeling exhausted, had lost her appetite and was experiencing distressing sensations in her face and body.

7.1.2 Predisposing Factors

Ms Smith was the eldest of 11 children and had taken responsibility for others in her family from a young age. She left school at a young age (13 or 14) and immigrated to the UK. She experienced a number of significant losses in her life, as well as a difficult marriage, but said that she never 'moped about' or 'dwelled' on these things. She had coped with these events by keeping active and it is likely that she avoided the experience of difficult emotions, as well as thinking about difficult emotions and experiences. In addition, Ms Smith had a longstanding medical condition (Barrets Oesphagus caused by acid reflux).

7.1.3 Precipitating Factors

Ms Smith experienced the tragic loss of her aunt and brother five years before the assessment. A year later she was diagnosed with a superficial blood clot and therefore had to discontinue the use of HRT. A few months later she started to feel very low in energy and lost her appetite.

7.1.4 Perpetuating Factors

The tragic loss of her brother and aunt within few months of each other, as well as the potential impact of discontinuing HRT, are likely to have contributed to Ms Smith's anxiety, somatic symptoms and low mood. This, together with a longstanding medical condition (Barrets Oesphagus caused by acid reflux) may have

led to a loss of appetite, leading to low energy with the consequence that she did fewer enjoyable activities. This is likely to have led to lower mood and a vicious cycle of low mood, exhaustion, poor appetite and fewer pleasurable activities.

7.1.5 Protective Factors

Ms Smith was motivated to engage in psychological therapy and was coming to appointments alone, even though this is difficult for her. She was also very conscientious, always arriving on time for appointments and having done her homework. She was a determined, strong and active woman, who had coped with adversities in the past. She had supportive daughters and enjoyed looking after her grandchildren.

8 Treatment Goals

Ms Smith said that she would like to be able to go back to being her normal self and be able to do the things that she used to do. Specifically, she wanted to be able to visit her daughters and grandchildren, go shopping, clean the house, do things for herself (e.g. getting her hair done) and go back to her normal eating and be able to sleep better.

9 Plan

We agreed to undertake six weekly sessions of psychological therapy with a break at Christmas time. We agreed that we would review her progress mid-way through treatment and decide what would be best for her moving forward. Following the review, we agreed to complete our sessions and schedule a follow up session.

10 Aims of treatment

The initial aim for treatment was to work on Ms Smith's priorities which were to eat better and manage her energy levels. It was formulated that poor eating was a key maintaining process for Ms Smith, leading to a cycle of low energy, avoidance of activity and increased anxiety. It was hoped that improving her energy levels through better diet, would enable her to work towards her other goals.

At the mid-treatment review Ms Smith felt that she had met many of her goals, including eating better, visiting her daughters and helping with the grandchildren, getting her hair done and going out shopping on her own. However, she was still experiencing distressing sensations and was having difficulty sleeping, therefore the latter part of treatment focused on these remaining difficulties.

11 Intervention

11.1 Re-establishing Healthy Eating Habits

Ms Smith's attributed her poor appetite to Barret's Oesphagus, a medical condition which affects the lining of the Oesphagus and causes acid reflux. We developed an understanding of what happens when Ms Smith had stomach pain. Ms Smith experienced pain in her stomach and loss of appetite due to her medical condition, as well as a change in mood following the loss of close relatives and the discontinuation of hormone replacement therapy (HRT). She stopped eating proper meals, which created more acid in her stomach. This made the pain in her stomach worse and a vicious cycle developed whereby she ate less, felt worse because of the increase in acid in her stomach and had less energy. Together we decided that the best way to break this cycle was for her to eat even when she was not hungry. The easiest things for her to eat when she was feeling unwell were soup, yoghurt and toast. If she felt more able to eat she could try to eat a proper meal as this would improve her energy levels.

Over the following three weeks Ms Smith completed a Food Diary to record the situations in which she ate, what she ate and how she felt before and after eating. She noted that she felt better after eating. Though there were days when she had no appetite, she persisted and over the weeks her eating and appetite improved.

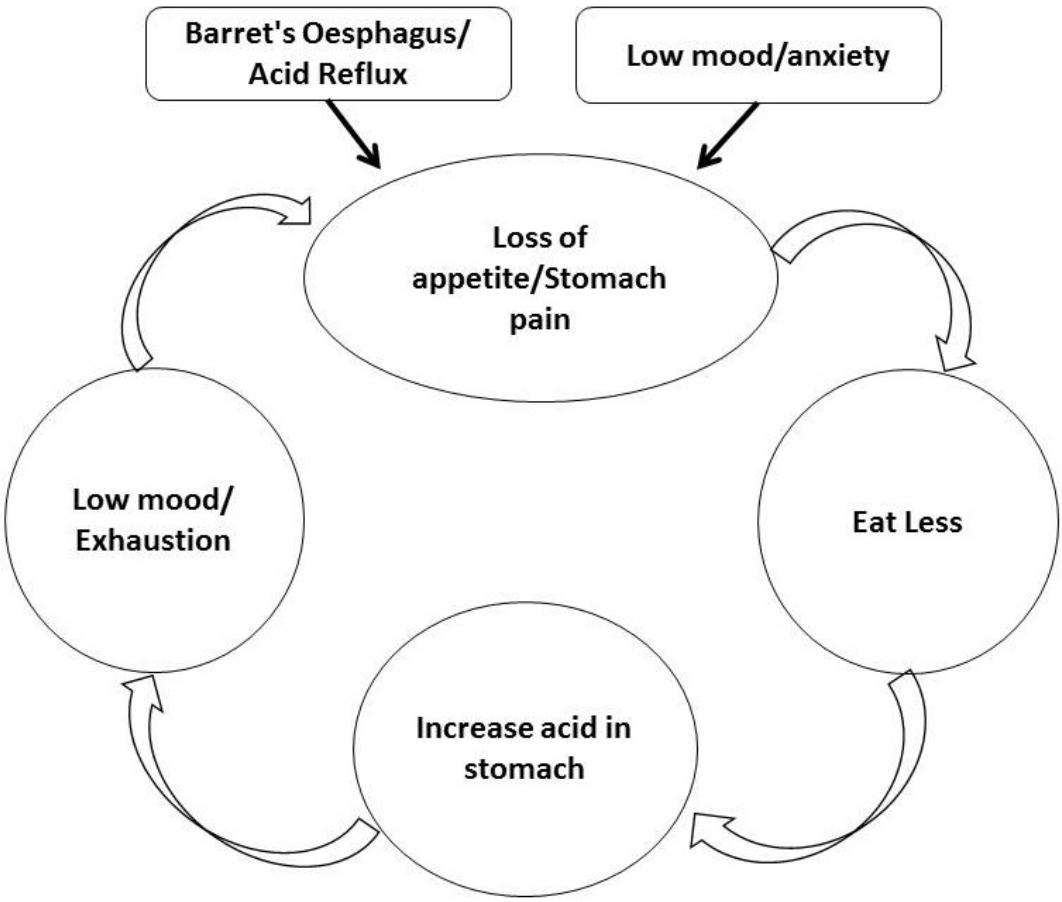

Figure 1 Vicious cycle of stomach pain, poor eating and low mood.

11.2 Dealing with Exhaustion

Ms Smith was determined to re-engage in old activities and began to do this of her own accord. However, her exhaustion was maintained by a 'boom and bust cycle' whereby she would engage in lots of activities but then become exhausted and withdraw from activities altogether. We developed a formulation to understand how the thought that she 'should be able to do it all' made her feel anxious and 'try

to do everything.' We spoke about ways to make changes by doing the things that were important to her, instead of trying to do everything, and using relaxation methods and self-care to look after herself when she felt anxious.

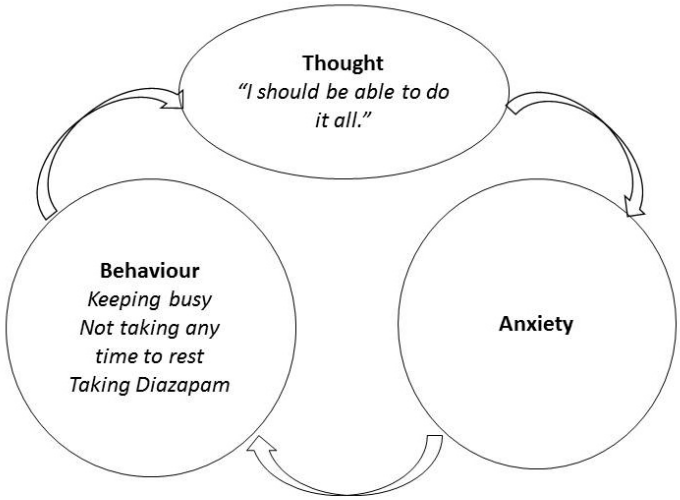

Figure 2. Cycle of exhaustion

We did a progressive muscle relaxation exercise in session, to which Ms Smith responded well. She then practiced this at home with a relaxation CD which she had bought. She kept a record of when she had practiced her relaxation exercises and how she felt afterwards. She noticed that it was harder to do the exercises on bad days and we therefore spoke about the importance of practicing consistently. I used the metaphor of developing a 'mental muscle' for relaxation so that it would become strong enough for her to use it on difficult days as well as good days. I also used the analogy of a Marathon runner, who takes breaks as part of a training schedule, which allows the body to recover and become stronger, to emphasise the importance of taking breaks and pacing herself so that that she wouldn't become exhausted as frequently.

We then developed strategies for self-care. Ms Smith identified things that she could do for herself, for example, having a bath, doing her relaxation CD, doing a word-search, watching TV and going for a walk. She recorded her mood before and after these activities and found that her mood was better afterwards.

We also made ‘coping cards’ for her for when she was feeling anxious. We wrote down things that she could do, for example relaxation exercises to help with anxiety and coping statements that might be helpful such as ‘I’ve coped before’ and ‘If I look after myself, I’ll be fine.’ She was particularly anxious about Christmas as she had invited all of her family. After Christmas she reported that she had cooked for everyone in the morning but had allowed the others to take over when they arrived. She had not taken Diazapam, which she had thought she might take over Christmas, and said that she had used the coping cards and found these helpful. She said that she was very pleased with herself and that her daughter had told her that she was very proud of her.

11.3 Understanding Distressing Sensations

After our mid-treatment review Ms Smith reported that the ‘burning’ sensations that she had previously described had gone away but that she now had pins and needles and numbness in her face. Ms Smith thought that perhaps the sensations were triggered by her anxiety about her mother, who had recently become unwell, and the recent anniversary of her brother’s death.

We sought to develop shared understanding of how Ms Smith responded to the sensations and what she could do differently. She said that when she noticed the pins and needles, she would pay attention to them, touch her face, check the mirror to see if her face was red, ask people if they could see anything and describe the sensations to them. She thought that these sensations meant that she was going to become unwell again and this increased her anxiety and she noticed more and more sensations. This developed into a cycle whereby she noticed sensations, checked them, became more anxious and noticed the sensations more. We spoke about how to break this cycle by not checking how the sensations looked or describe them to other people. Ms Smith stopped checking her sensations and noticed that the pins and needles were still present but that they were no longer as distressing as before.

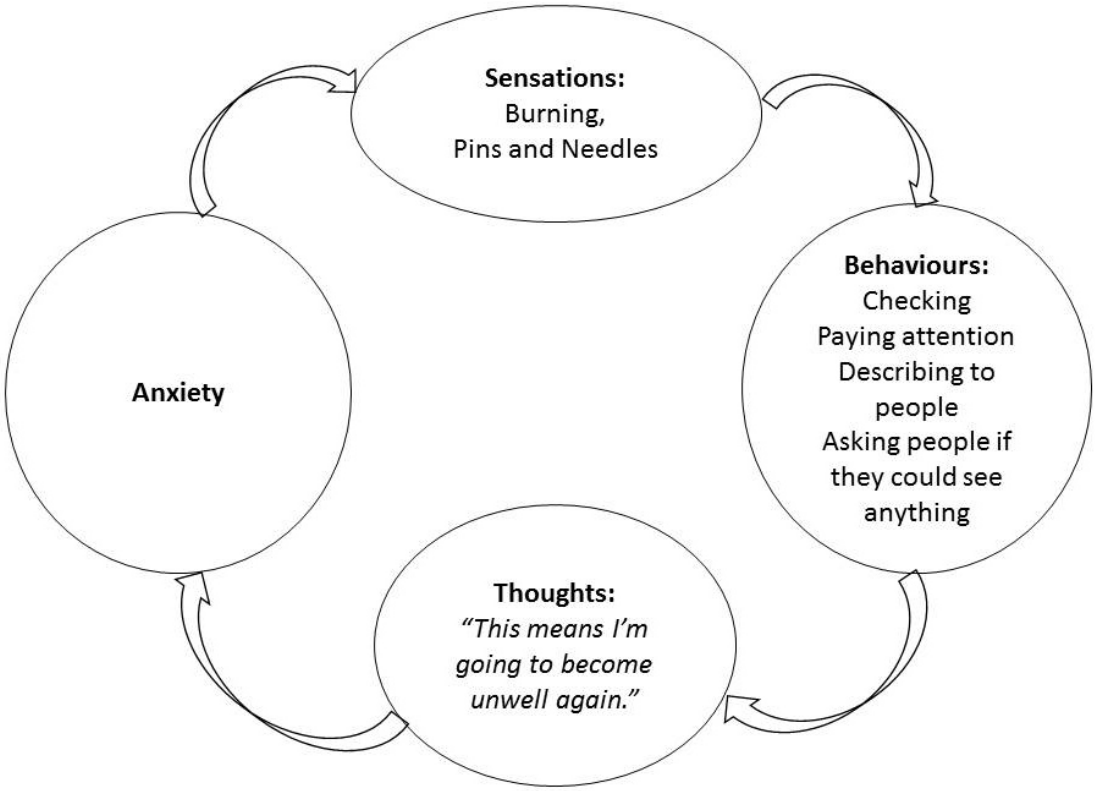

Figure 3. Vicious cycle of distressing sensations.

11.4 Sleep Hygiene

Sleeping had not been a priority for Ms Smith as she said that she had always been a poor sleeper. However, we discussed sleep hygiene and thought about some strategies that might improve her sleep. She agreed to try to reduce stimulating activity in the evening, for example, smoking cigarettes, drinking alcohol, watching TV and eating chocolate just before bed. She said that she usually had energy at night time and started to clean the house or do other activities. We spoke about training her body to relax in the evening, for example by doing a relaxation exercise and doing activities like cleaning in the morning rather than the evening. She tried these strategies out but found that her sleep was still not very good. However, we discussed that her body had been in a pattern of wakefulness at night time for a very long time and that it might therefore take some time to train it to relax in the evenings.

12 Relapse Prevention and Follow up

We completed a relapse prevention plan to help Ms Smith to understand what had triggered her difficulties and how she could respond to them if they should arise in the future. We also made a list of strategies that she could use to help her to stay well, for example, having time for herself, engaging in pleasurable activities and doing thing she enjoyed such as looking after her grandchildren, but also taking time to relax for herself.

13 Outcomes

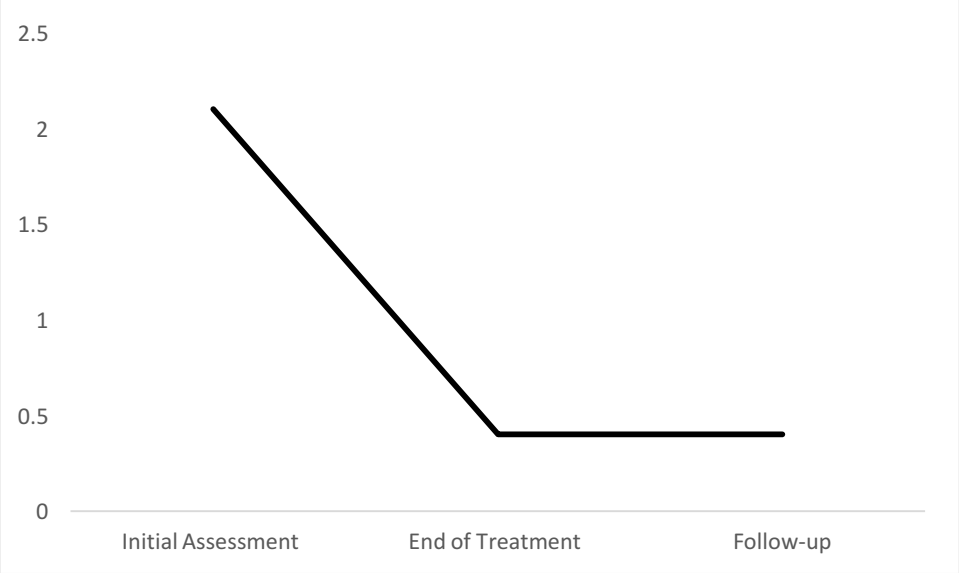

Figure 4. CORE-10 Scores at assessment, end of treatment and follow-up.

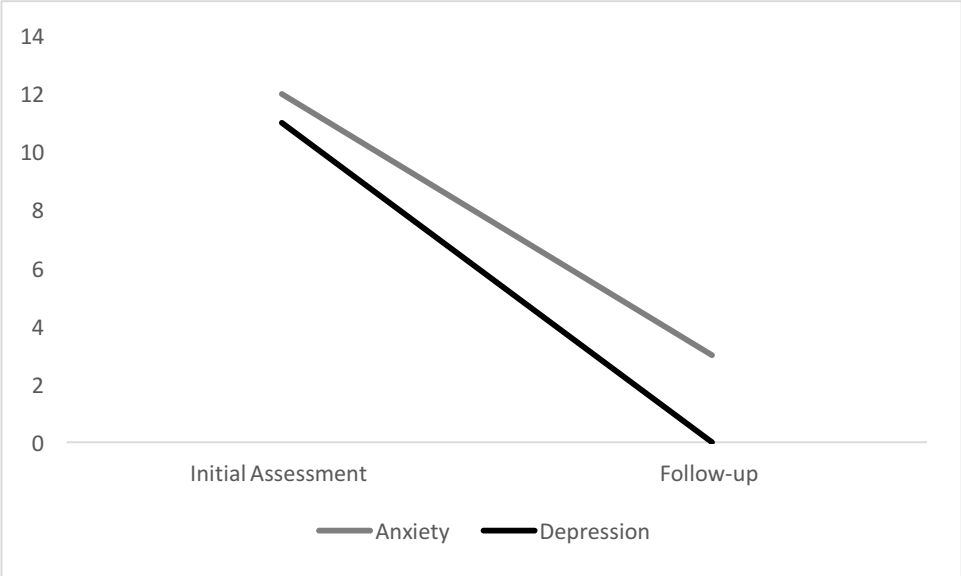

Figure 5. HADS Scores at assessment and follow-up.

14 Discussion

14.1 Addressing core maintaining processes

In working with Ms Smith, we sought to address the core processes that were maintaining her anxiety and low mood, namely poor diet and a 'boom and bust' cycle of activity, rather than doing a CBT protocol for a specific anxiety disorder or for depression. As such the approach taken could be described as transdiagnostic. On reflection, I think that this was a pragmatic and helpful approach to take with Ms Smith as these behaviours are likely to have been maintaining both her anxiety and low mood. Her improvement also suggests that this was a good approach to adopt with her.

We also sought to address her distressing sensations using a simple formulation to help Ms Smith to understand that the behaviours in which she engaged were perpetuating the problem. By not engaging in these behaviours, Ms Smith learned that she would experience the sensations but that they didn't become worse with time. She also learned that it was her response to the sensations, rather than the sensations themselves, that were causing her distress.

14.2 Use of relaxation and self-care strategies

As discussed above (section 4.3), the evidence suggests that relaxation training may be particularly helpful for treating anxiety among older adults. As part of treatment, we did relaxation exercises in session and Ms Smith practiced further exercises at home. Ms Smith reported that she found these exercises helpful. Ms Smith was very self-critical at the start of treatment and rarely took time to look after herself. We generated ideas for her for engaging in self-care, which she then practiced at home. We summarised these on coping cards which Ms Smith used and found particularly helpful during stressful times, for example at Christmas.

14.3 Limitations

One of the limitations of this study is that we did not fully address Ms Smith's difficulty with sleep. This was not a priority for her as she reported having been a poor sleeper all of her life. Perhaps, had we had more time to implement the sleep hygiene strategies, further improvement could have been made. However, Ms Smith felt that she would be able to continue to implement these strategies alone.

Another important limitation pertains to the choice of self-report measure of anxiety and depression. The evidence suggests that no single measure performs adequately in assessing and monitoring anxiety among older adults, but that the HADS and Beck Anxiety Inventory are the most suitable measures for this population (Dennis, Boddington, & Funnell, 2007). As such, multiple measures could have been used to elicit potentially more sensitive ratings. However, one needs to balance potential benefits of using additional measures against the time requirements and potential burden imposed on a person when asking them to complete multiple measures.

14.4 Reflections

Ms Smith and I developed a good therapeutic relationship. Although she was highly distressed when we first started working together, she had a good sense of humour and warmness which made it enjoyable to work with her. I think that coming from similar cultural background also helped our therapeutic relationship in that she may have thought that I understood her better because as a result of our similar origins. The potential disadvantage of this was that it was sometimes difficult to maintain boundaries, for example she liked to ask me about my trips home. Though I enjoyed working with Ms Smith, I also found it anxiety provoking at times as I had more experience of working within a specific CBT protocol than drawing on different approaches, as in this case. However, I think that as a result of this experience I will be more confident in working more flexibly with clients and have learned the

importance of reflecting on how best to maintain boundaries whilst maintaining a warm and empathic relationship with a client.

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Appendix: 5Ps Formulation

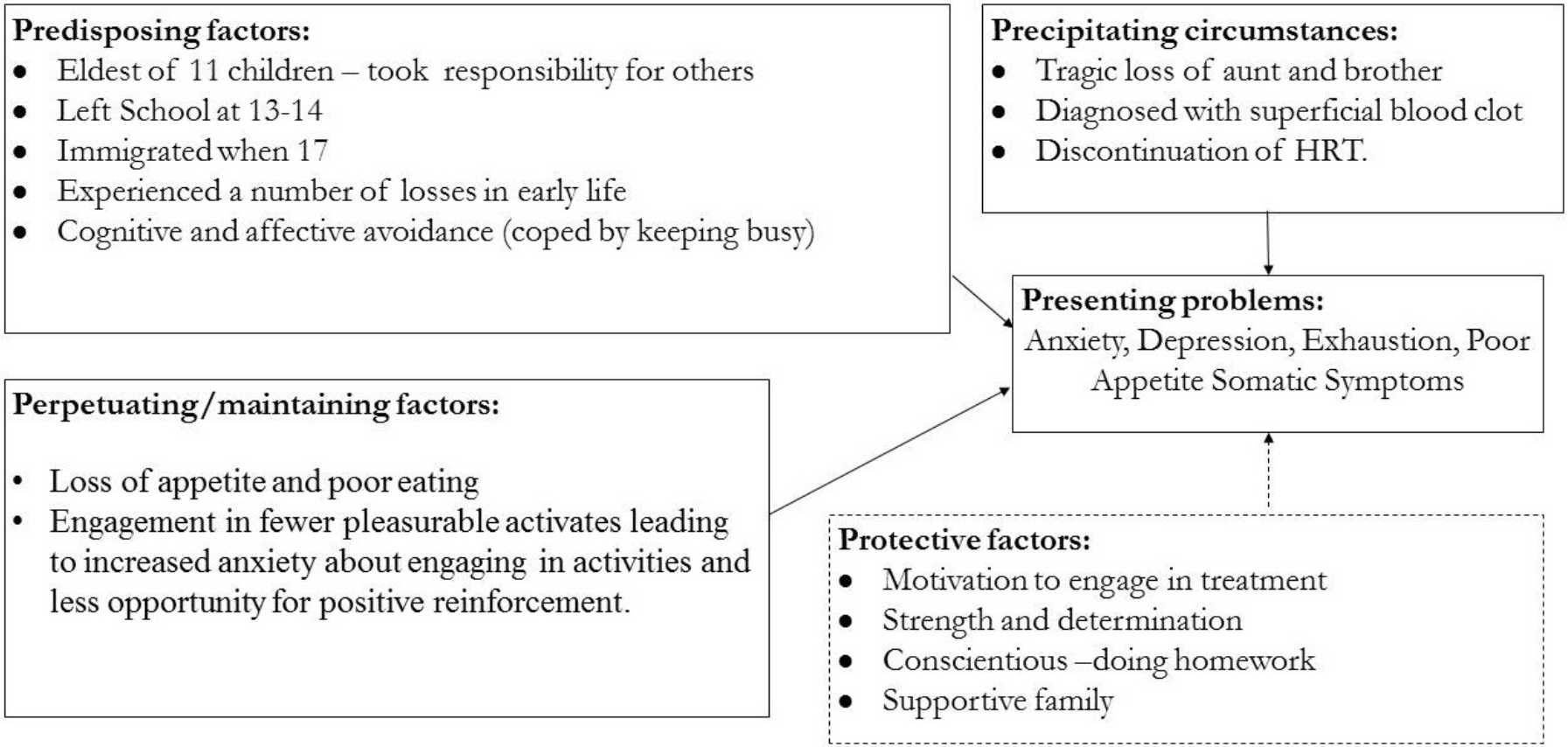

Figure 1: Presenting problem with predisposing, precipitating, perpetuating and protective factors